



The
ARCHITECTURE
OF
THE FARM

THE
ARCHITECTURE OF THE FARM

A SERIES OF DESIGNS

FOR

FARM-HOUSES AND FARM-STEADINGS, FACTORS' HOUSES,
AND LABOURERS' COTTAGES

WITH DESCRIPTIONS

BY

JOHN STARFORTH

ARCHITECT

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SCOTLAND HAS ATTAINED ITS PRESENT HIGH POSITION
AS AN AGRICULTURAL COUNTRY.

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OF FARM BUILDINGS AND LABOURERS' COTTAGES,

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ADVERTISEMENT.

THE appearance at the present time of a work on Farm Architecture demands, we think, no apology or explanation. Every other branch of architecture is either far in advance of it, or in a rapidly progressive state. The interest evinced by all ranks and classes in agriculture, and the amount of practical knowledge brought to bear on the implements employed in and the operations connected with it, together with the impetus given by the fostering encouragement it has received from the Highland and Agricultural Society of Scotland, and the sister Societies of England and Ireland, have contributed to effect so many important improvements in the routine operations of a farm, that a corresponding modification has become necessary in the buildings themselves. To meet the exigencies which these improvements called forth, various treatises of merit have already appeared on farming. These, however, are so exclusively engrossed by the consideration of particular systems of husbandry, &c., that they leave out of view the form and character of the erections necessary for carrying on the work of the farm, except in so far as they are in immediate connection with the processes or operations under consideration. Even in cases where the erections thus proposed are not comparatively set aside by the advancements of agriculture itself, the buildings are in general so devoid of all pleasing external features, that the illustrations of them given in these works could not be consulted with advantage at the present day, when a more refined taste prevails with regard to the exterior of our farm-houses and cottages. This growing taste in Scotland has been fostered in an especial manner through the premiums given by the Highland and Agricultural Society, aided, no doubt, in some degree, by the facilities afforded by railways in bringing the attractions of an English cottage, with its lovely surrounding landscape, to our very doors. But throughout the kingdom generally, men have begun to discover how few and simple are the materials which constitute the beautiful and the picturesque, when disposed with taste and

ADVERTISEMENT.

judgment; and as a necessary result, while our Landed Proprietors are now inspired with a lively and philanthropic zeal to promote the domestic comforts of both Farmer and Cottar, they are equally anxious to conjoin pleasing exteriors with internal convenience.

While, however, this incipient taste for all that is pleasing and attractive in the exterior and interior of our farm-houses is fast taking root over the whole kingdom, there is much still wanting ere it can be carried out in full efficiency. Although it is generally admitted that the dwellings of the farmer and the labourer are perfectly susceptible of being made attractive features in the landscape, and at the same time of combining comfort and commodiousness of interior with this external neatness; yet, somehow, when we make the attempt to carry out these views, we feel ourselves often trammelled by questions and calculations of expense, and frequently resolve to abandon the attempt by curtailing the accommodation, and dismantling the exterior of much that makes a home or a habitation attractive to a cultivated mind. We are perfectly satisfied that the difference in expense of construction is trivial to what is generally imagined, between a neat cottage with a few effective and rustic ornaments tastefully arranged, and the same building bald and repulsive from lack of ornament of any kind, when the execution is intrusted to proper tradesmen, who thoroughly understand their business.

It is with a view to obviate this evil, and supply the foregoing desiderata, that the present work has been undertaken; but how far the author has succeeded in the attempt is a question for the public to answer. He can only say that he has laboured assiduously to accomplish the end in view: taking care to consult the highest authorities; personally visiting and studying the most approved examples of cottages and farm buildings; availing himself of every source of information bearing on his subject; and sparing no pains to produce a practical and useful volume, such as may meet the wants of the present time. Should the attempt be pronounced successful, he aspires to no higher praise.

12 SOUTH CASTLE STREET, EDINBURGH,
September 1, 1853.

TABLE OF CONTENTS.

DIVISION I.

THE DWELLINGS OF THE LABOURER, THE LAND-STEWARD, THE FACTOR, AND THE FARMER.

A LABOURER'S COTTAGE. No. 1,	See PLATE I.
A LABOURER'S COTTAGE. No. 2,	II.
A LABOURER'S COTTAGE. No. 3,	III.
A COTTAGE FOR A FIRST PLOUGHMAN OR GRIEVE,	IV.
PAIR OF LABOURER'S COTTAGES. No. 1,	V., VI.
PAIR OF LABOURER'S COTTAGES. No. 2,	VII.
A ROW OF TWO-STORY COTTAGES. No. 1,	VIII., IX.
A ROW OF TWO-STORY COTTAGES. No. 2,	X., XI.
GROUP OF FOUR TWO-STORY COTTAGES,	XII., XIII.
GENERAL DETAILS OF STONE DRESSINGS, &c., IN COTTAGES,	XIV.
TIMBER DETAILS IN COTTAGES,	XV.
A LAND-STEWARD OR BAILIFF'S HOUSE,	XVI., XVII.
A FARM-HOUSE. No. 1,	XVIII., XIX.
A FARM-HOUSE. No. 2,	XX. to XXV.
A FARM-HOUSE. No. 3,	XXVI. to XXX.
A FARM-HOUSE. No. 4,	XXXI. to XXXV.
A FACTOR'S HOUSE,	XXXVI. to XXXVIII.
RESIDENCE FOR A PROPRIETOR FARMING HIS OWN ESTATE,	XXXIX. to XLIV.

DIVISION II.

THE FARM-STEADING OR FARM-OFFICES.

A FARM-STEADING, No. 1, WITH HORSE-POWER,	. . .	PLATES XLV. TO XLVII.
A FARM-STEADING, No. 2, WITH WATER-POWER,	. . .	XLVIII. TO L.
A FARM-STEADING, No. 3, WITH STEAM-POWER,	. . .	LI. TO LIII.
A FARM-STEADING, No. 4, WITH STEAM-POWER,	. . .	LIV. TO LVI.
A FARM-STEADING, No. 5, WITH STEAM-POWER,	. . .	LVII. TO LIX.
A FARM-STEADING, No. 6, WITH STEAM-POWER,	. . .	LX. TO LXII.

DIVISION I.

THE DWELLINGS OF THE LABOURER, THE LAND-STEWARD, THE FACTOR, AND THE FARMER.

PLATES I. TO XLIV.

SIR UVEDALE PRICE says, with great truth, that “the difference in expense between good and bad forms is comparatively trifling—the difference in their appearance immense.” This theory it is the object of the present Division of the work to reduce to a practical test.

The whole of the Plans, in respect of arrangement and accommodation, will, it is presumed, with the aid of the accompanying descriptions, be readily understood. A few remarks, however, may be necessary in reference to the details of construction, and of the external and internal finishings, to serve as a guide in the selection of materials, and the best way of using them. We shall, however, attempt no more than to convey a general idea of the style of execution and finish, in accordance with which the estimates of the probable cost have been prepared; as more minute details can only be embodied in a regular specification, or exhibited on the working-plans.

ARCHITECTURE OF THE FARM.

Mason Department, &c.

In every situation, the whole area of the buildings, and 2 feet beyond, should be excavated to the bottom of the foundations, and not limited, as is too frequently the case, to trenches cut for the walls alone. In this way provision can be made for ventilation under the sleepers in the living-rooms,—the free admission of air being the best preventive of dry-rot.

The drains should be of 5-inch fire-clay pipes, cradled, and jointed with Portland cement.

For all the classes of dwellings the outer surface of the external walls should be executed with well-squared rubble, clean faced, with droved freestone dressings. Where freestone can be easily procured, the principal fronts of the first-class houses may, at a trifling additional expense, be made to look very handsome by adopting irregular or random coursing, close-jointed, and nided or dabbled on the face. Where projecting quoins or corners are introduced, they should, in every case, have simply a droved draught or margin round the angles; the centre of the stone being left with its natural surface, or made rough, with a few strokes of the tool.

The upper part of the chimney-shafts, above the roofs, should be of ashler; but in cottages they may be of rubble, dressed on the beds and built solid.

In no class of buildings need the stairs be of stone, as timber, which is cheaper, can now be made, after the old-fashioned manner, to look well, even for the best class of houses.

The floors of the pantries, and other outhouses, may, where pavement is dear, be laid with fire-clay tiles, on a bedding of road metal or dry stone shivers, beaten very hard, and set in a bed of lime, and grouted with thin mortar on the top. The smaller 9-inch tiles are more free of twists than the larger 12- or 14-inch size.

GENERAL DETAILS OF CONSTRUCTION.—DIV. I.

Carpenter, Joiner, Plumber, Slater, and Plasterer's Departments.

The sleepers (which should be laid on flat stones) and the scantlings of roofs, generally, may be $6\frac{1}{2} \times 2\frac{1}{2}$ inches, and placed from 18 to 20 inches apart, from centre to centre; the joisting of the upper floors should be from 7 to 10 inches deep, according to the span; the flooring, $1\frac{1}{8}$ inch thick, should be grooved and tongued; and the sarking of roofs must not be less than $\frac{3}{4}$ inch thick.

The projecting ends of the roof, scantlings on eaves and gables, should, in the first-class buildings, be clean-dressed, and the soffits of the projecting parts of roofs lined. The corresponding parts of the cottages and porches should be finished in the simplest and most rustic manner with larch, having the bark stripped.

The interior doors for the cottages and servants' apartments in the better class of buildings may be made of $1\frac{1}{2}$ -inch wood, square framed, without mouldings, or of $\frac{3}{4}$ -inch, grooved, tongued, and beaded deal, with three back bars. The living-rooms of the farm-houses should have the doors framed with $1\frac{3}{4}$ -inch wood, six-panelled, as shewn with planted mouldings in Plate XLIV. The exterior principal entrance-doors should, for houses in the old Scotch style, be framed with $1\frac{1}{2}$ -inch wood, and lined on the outside with $\frac{7}{8}$ -inch deal, grooved, tongued, and beaded, with ornamental mock bands to the hinges, and antique handle. These may be made of sheet-iron, and painted with japan black. The outer doors for the offices and cottages may be of $1\frac{1}{4}$ -inch deal, grooved, tongued, and beaded, with three back bars. The shutters for the better class of buildings should be framed with $1\frac{1}{2}$ - and $1\frac{1}{4}$ -inch wood, with planted mouldings; and those of the cottages with $\frac{3}{4}$ -inch plain deal, having cross ends. The sashes of the cottage windows may have zinc frames of a lozenge pattern fitted into them, and be made in three or two divisions, having one of the sashes to slide on the inside, as more particularly described in Plate VIII. The doors and windows of the cot-

ARCHITECTURE OF THE FARM.

ages, and of bed-rooms and servants' apartments in the other buildings, should be finished with 4-inch plain facings, having a bead on the one edge, and an ogree moulding on the other. The ingoings and breasts of the windows should be lined with grooved, tongued, and beaded deal. The doors and windows of principal apartments in the first-class buildings should have 6½-inch double or 5-inch single fascia architraves set on blocks.

The whole of the timber for carpentry purposes in the cottages and offices may be of larch or spruce fir, full grown; and in the other buildings of Baltic plank and battens. The interior framing and finishing, in every situation, to be of American yellow pine.

All the exterior timber-work of roofs, doors, and windows, should be stained in imitation of oak with a liquid preparation of asphalt.

The ridges, peands, valleys, and gutters of roofs may be executed with 18-oz. zinc, and the platforms with 22-oz. zinc. In exposed situations the chimney-shafts should have flashings. These and the gutters, to ensure durability, should be of lead. The water-closets should be provided with Kirkwood's patent fittings.

The better class of buildings, which have projecting roofs, should have English slates. Those dwellings with stone skews and ridges, in imitation of old Scotch houses, look best when covered with the greenish-gray slate of the Birnam or Glenalmond quarries; but the English sea-green slate of Westmoreland is also well adapted for this style.

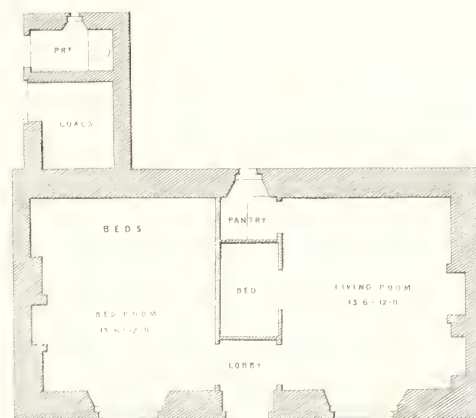
The inside of the exterior walls, in every situation, should be lathed and plastered, the standards being fixed with malleable-iron holdfasts, and the wall-heads beam-filled. The cottages and offices of the larger houses may be finished with two-coat plaster, hard rubbed in and floated, without any plaster cornices. The principal rooms of the first-class buildings should have plain moulded cornices; but a small moulding will be sufficient for the bed-rooms.



END ELEVATION



FRONT ELEVATION



PLAN



PLATE I.

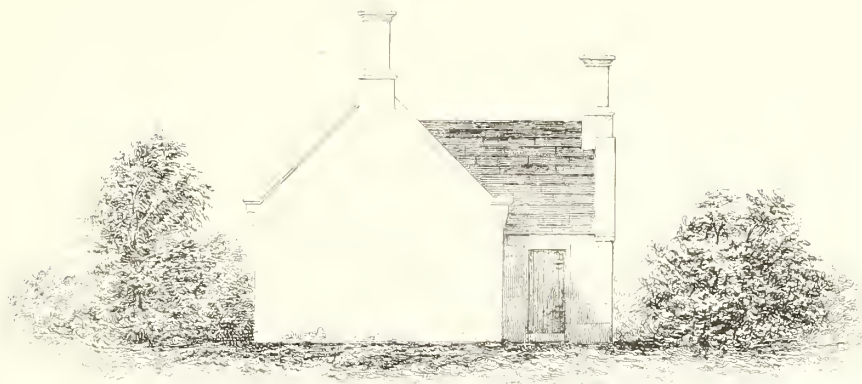
A LABOURER'S COTTAGE. No. 1.

THIS design is given as the cheapest form of dwelling for a labouring man, consistent, as far as possible, with the supply of those domestic conveniences, which the requirements of the present age demand.

The accommodation consists of a small lobby, on the right of which is the living room, $13\frac{1}{2} \times 12\frac{1}{2}$, with a concealed bed-closet. A small pantry, lighted by a window at the back, enters from this room, where, if desired, a small sink may be placed. To the left of the lobby is the bed-room, of the same dimensions as the living room, affording space, by a slight recess in the external wall, for two beds; but this arrangement is not recommended, for separate sleeping apartments should in all cases be provided. The plan is given, however, in deference to the prejudice existing among cottagers themselves against any innovation of time-honoured customs—a prejudice, too, which proprietors, in some instances, take no trouble to dissipate. At the back of the house is a privy and coal-cellar.

The walls may be constructed of common rubble or brick, according to the facility of obtaining either; and the roof covered with tiles, if slates are found to be too expensive.

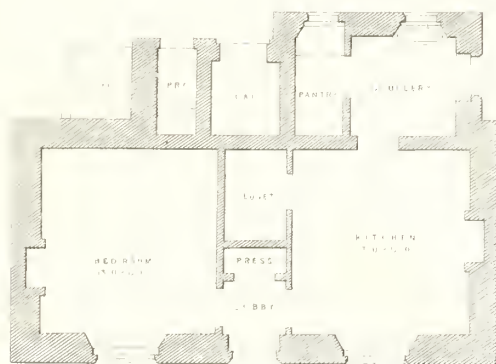
The estimated cost is about £112.



END ELEVATION



FRONT ELEVATION



PLAN



PLATE II.

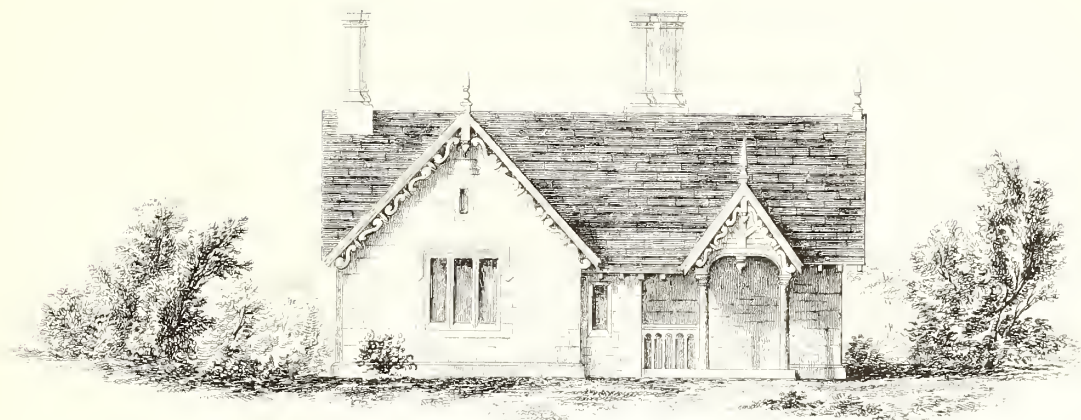
A LABOURER'S COTTAGE. No. 2.

THE accommodation afforded in this Cottage does not differ essentially from No. 1 ; but the addition of the scullery, lobby press, and back door, together with the enlarged size of the pantry, are matters of no slight importance in the eyes of the prudent housewife.

The walls and roof may be constructed as in No. 1. The floors of the living room, scullery, and pantry, may be laid with square fire-clay paving tiles, if they can be readily procured.

With the view of adding to the attractiveness of the exterior, some ornamental details are introduced, which involves very little additional expense, enlarged plans of which will be seen in Plate XIV. The chimneys, skews, and water-barge above the door, may be of dressed stone.

The estimated cost is about £135.



FRONT ELEVATION



PLAN



PLATE III.

A LABOURER'S COTTAGE. No. 3.

IN this design we have attempted to shew the accommodation which should be provided in a Labourer's Cottage of the first class. The ornamental details must be looked upon as accessories merely to the effect, to be introduced when the Cottage is placed in a conspicuous position, and to be omitted, at the option of the proprietor, if secluded.

Entering by the porch, we pass across the passage to the kitchen or living-room, which is 13 feet square, and contains a closet. From the kitchen, a door opens into the scullery, through which access is obtained to the back court. A pantry is attached to the scullery, lighted by a separate window. Returning to the passage, we enter, on the right hand, a bed-room, $12\frac{1}{2} \times 11$ feet. At the end of the passage is a second bed-room, $11\frac{1}{2}$ feet square. The passage has the advantage of a plentiful supply of light, and affords the very desirable facility of obtaining separate access to each room. In the back court are a coal-cellar, place for ashes, and a privy.

The walls of this Cottage may be executed with coarse or suecked rubble; and the splays on window rebates, the labels, and chimney-shafts with droved stone. The floors of kitchen and passage can be laid with polished Arbroath pavement,

PLATE III.—A LABOURER'S COTTAGE. No. 3.

and the scullery and pantry with paving tiles. The partitions to be constructed of brick on bed. The roof scantlings, $6\frac{1}{2} \times 2\frac{1}{2}$ inches, should be placed 18 inches apart, from centre to centre; and where the roof projects, at the gables and eaves, the scantlings and under side of sarking must be clean dressed, the latter being beaded on the joints, and to have a small moulding along the eaves and on the gables, above the barge boarding.

This design is suitable for a porter's lodge, or for the dwelling of a gardener, farm-overseer, or gamekeeper.

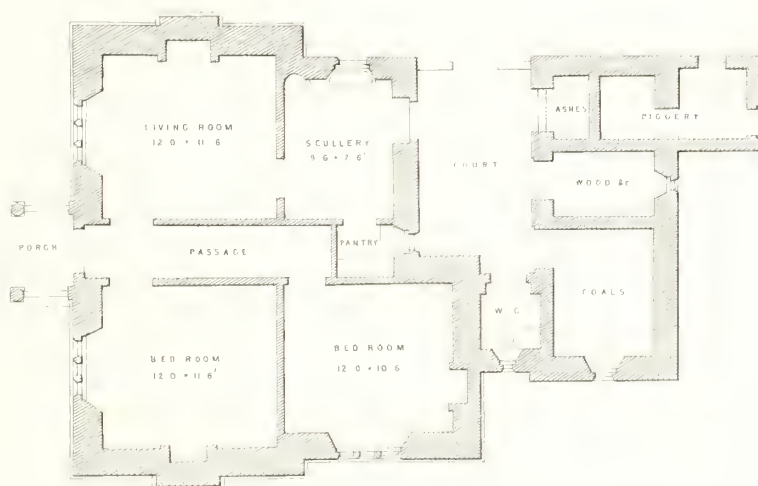
The estimated cost is about £220.



FRONT ELEVATION



END ELEVATION



PLAN



PLATE IV.

A COTTAGE FOR A FIRST PLOUGHMAN OR GRIEVE.

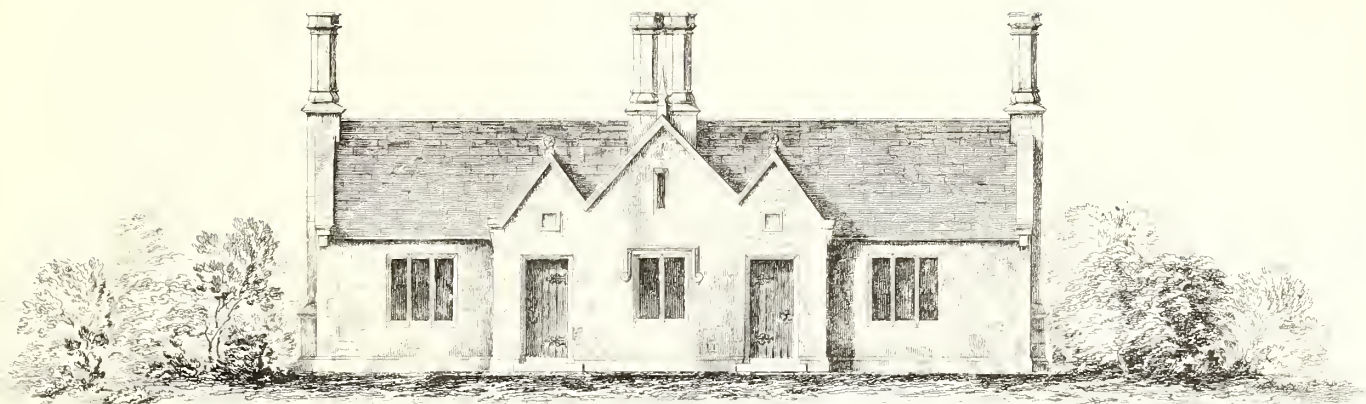
THIS design is intended for a situation contiguous to a public road, or where it would form a conspicuous object in the landscape, viewed from any part of the domain. If placed in a retired locality, the ornamental skews and chimney-head mouldings may be finished plain, and the stone mullions taken away.

The living-room, $12 \times 11\frac{1}{2}$ feet, is placed to the left of the passage, a door from which leads to the scullery, $9\frac{1}{2} \times 7\frac{1}{2}$ feet, which is fitted with a boiler at the angle, and a sink at the window. A small pantry, lighted by a separate window, is attached to the scullery. On the right of the passage is the family bed-room, of the same dimensions as the living-room. At the end of the passage is a second bed-room, measuring $12 \times 10\frac{1}{2}$ feet. A door from the scullery opens into the court, in which are wood- tool- or poultry-house, coal-cellar, and water-closet or privy. A piggery is also attached, and a receptacle for ashes.

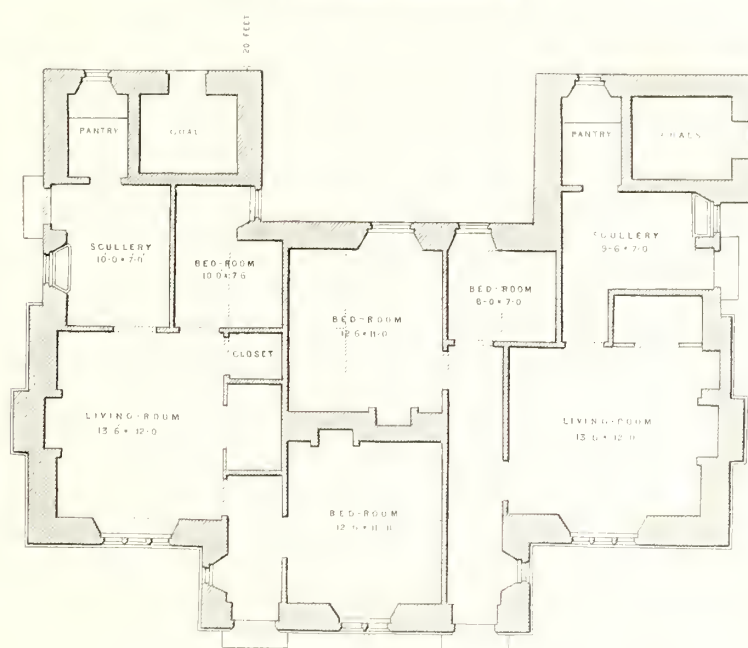
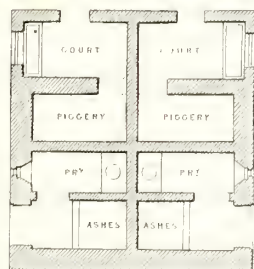
The details of the porch, on a scale of $\frac{3}{10}$ inch to the foot, will be found in Plate XV.; and in Plate XIV. the details, on same scale, of the chimney copes.

By a trifling alteration, this Cottage may be adapted to the requirements of persons in the middle class of life, with one or two children, or to a gentlewoman of limited income.

The estimated cost is about £225.



FRONT ELEVATION



PLAN



PERSPECTIVE VIEW



PLATES V. AND VI.

PAIR OF LABOURER'S COTTAGES. No. 1.

THIS design may, perhaps, appear rather too ornamental in its details for this class of dwellings, except where intended for erection in a very conspicuous position on an estate. It may, however, be rendered plainer, and its general effect at same time preserved, by taking away the projecting chimneys, and making the copes and bases without the ornamental mouldings, or by substituting chimney-shafts of artificial stone. The pinnacles and panels of the gables may also be omitted.

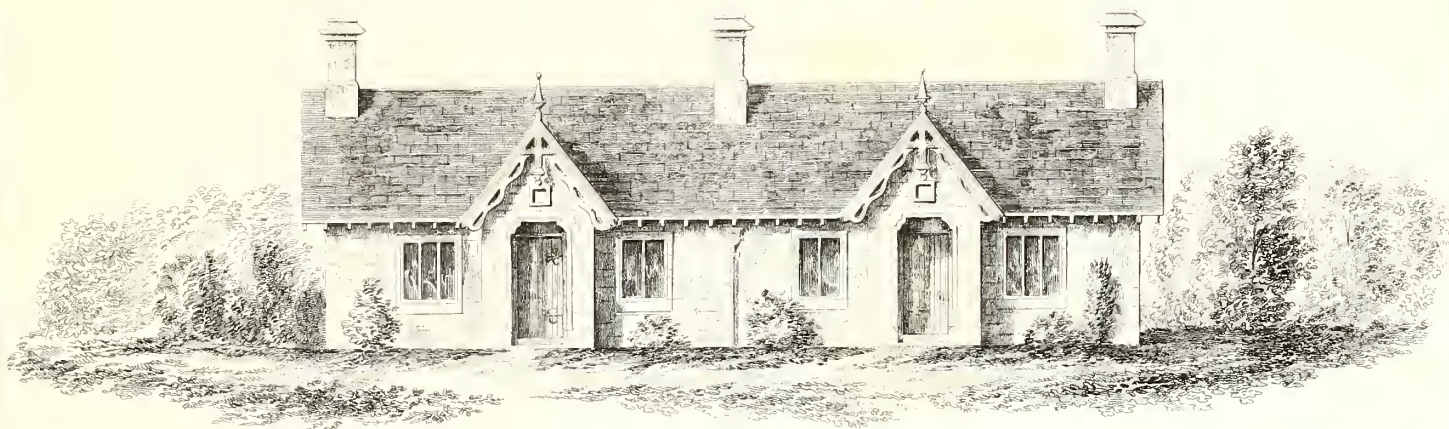
The internal accommodation of these Cottages may be considered complete. Each contains a living-room $13\frac{1}{2} \times 12$ feet, with a concealed bed-closet; a bedroom $10 \times 7\frac{1}{2}$ feet; and another (double-bedded) $12\frac{1}{2} \times 11$ feet, with a fireplace. There is a scullery, leading off the living-room, and a small pantry and coal-cellar.

It will be noticed that, in the right-hand Cottage, all the rooms have separate entrances by the passage; a convenience also extended to the other dwelling, with the exception of the smaller bed-room, which opens into the living-room.

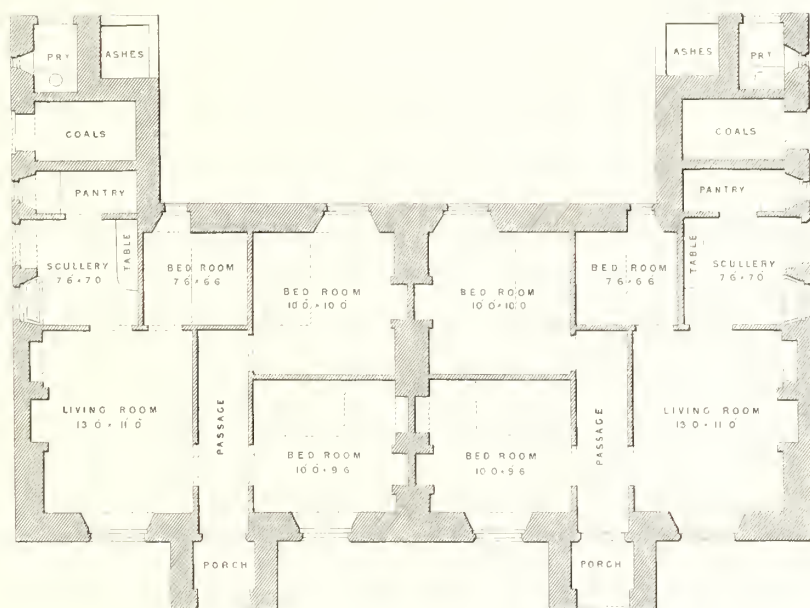
The outhouses, which are detached, consist of a place for ashes, a privy, and a piggery.

Plate VI. gives a perspective view, by which the general scope of the design will be more readily comprehended.

Estimated cost, £375.



FRONT ELEVATION



PLAN

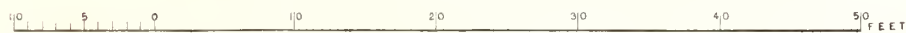


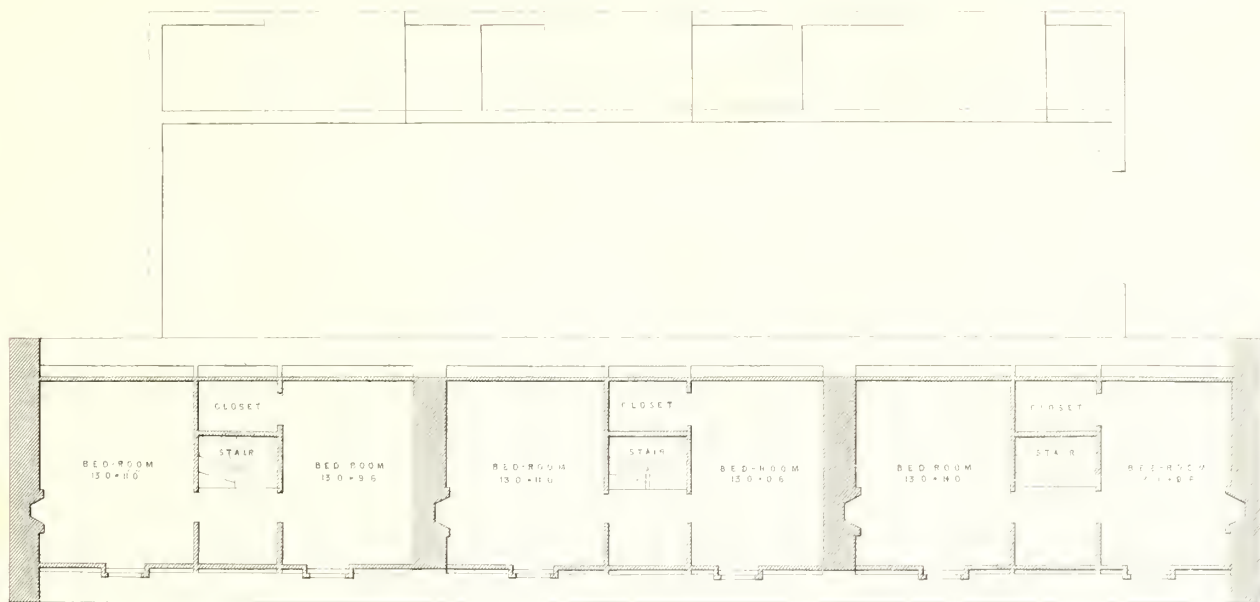
PLATE VII.

PAIR OF LABOURER'S COTTAGES. No. 2.

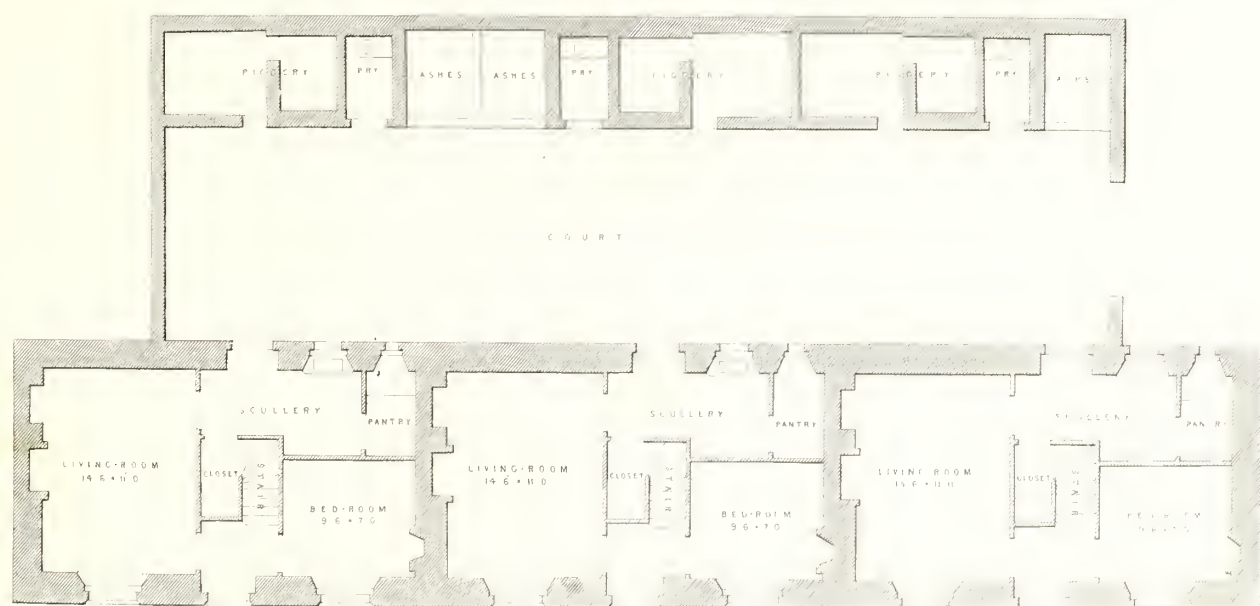
ON the whole, perhaps, the arrangement of these Cottages may be preferred to that of Plate V. The rooms, however, are on a somewhat smaller scale. The outhouses, also, from being attached to the main building, are of more convenient access; while the addition of the porch is a great improvement, both on the external appearance of the structure, and the comfort afforded to the inmates. The slight degree of ornamentation, too, is at once striking and appropriate; and, at same time, of a very inexpensive character, as will be seen by referring to Plates XIV. and XV., where the details of chimney-shafts, porch, and windows, will be seen.

The accommodation consists of a living-room, 13×11 feet; a bed-room 10 feet square, and another $10 \times 9\frac{1}{2}$ feet, both with fireplaces; there is also a smaller bed-room, $7\frac{1}{2} \times 6\frac{1}{2}$ feet, entering from the living-room. At the back of the latter is the scullery, $7\frac{1}{2} \times 7$ feet, and a small pantry with door opening to the back court. The offices consist of a coal-cellar, place for ashes, and privy.

Estimated to cost about £380.

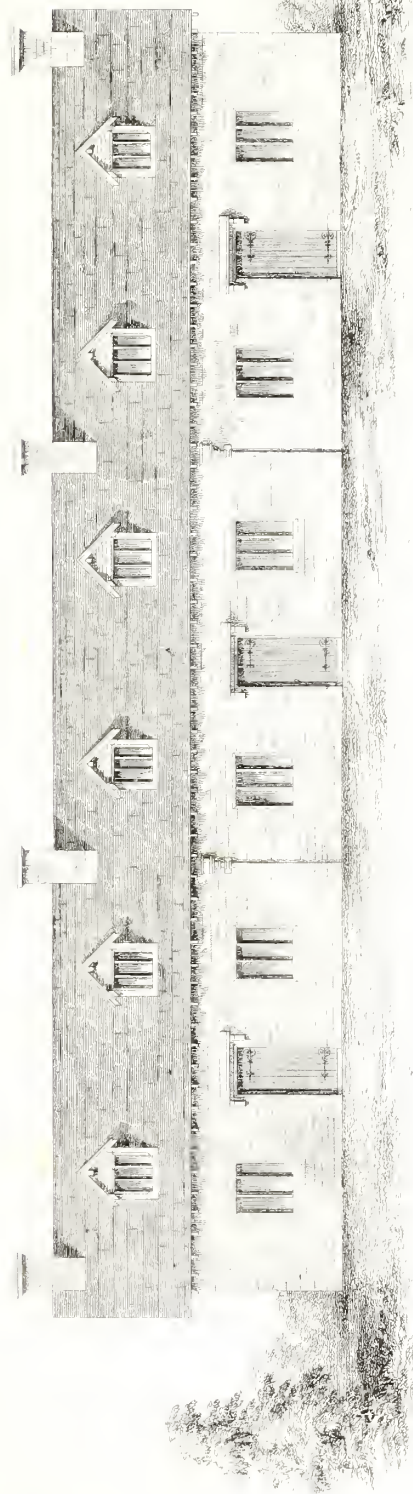


PLAN OF THE BEDROOM FLOOR



PLAN OF THE GROUND FLOOR





FRONT ELEVATION



PLATES VIII. AND IX.

A ROW OF TWO-STORY COTTAGES. No. 1.

THE elevation of these Cottages, as seen in Plate IX., is extremely simple, while the projecting roof and dormer-windows give a somewhat pleasing effect to the group. A bed-room floor in a labourer's cottage may be considered a novelty; but no one can deny that it is a great improvement on the old system of ground floors only. The advantages of this method of arrangement, whether we consider its comparative economy, or the increased comfort and convenience secured to the labourer's family, must be admitted.

Each Cottage contains, on the ground floor, a living-room, $14\frac{1}{2} \times 11$ feet; a bed-room, $9\frac{1}{2} \times 7$ feet; a scullery and pantry, with coal-cellar below the stair. On the upper floor are two bed-rooms, 13×11 feet and $13 \times 9\frac{1}{2}$ feet, and a lumber-closet. The family bed-room is intended to be on the ground floor, which we think desirable, and the sleeping places of the other members of the family on the attic story.

The offices, which are detached, consist of a receptacle for ashes, a privy, and piggery.

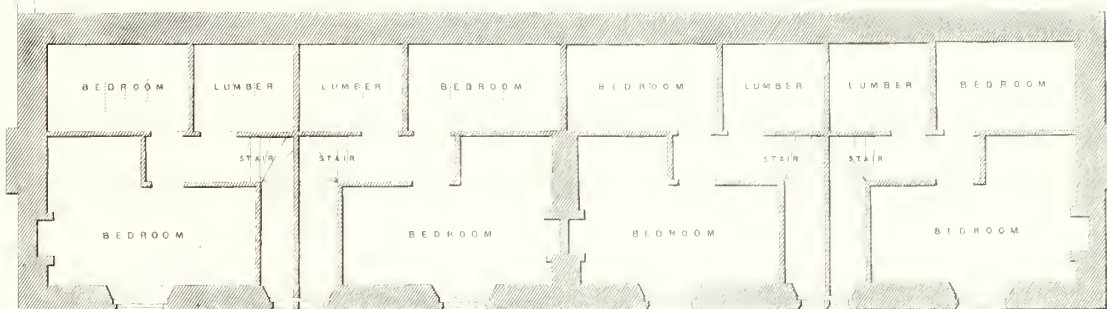
The windows, both of the ground floor and bed-rooms, are divided into three compartments. The central divisions of those on the ground floor are made to slide

PLATES VIII. AND IX.—A ROW OF TWO-STORY COTTAGES. No. 1.

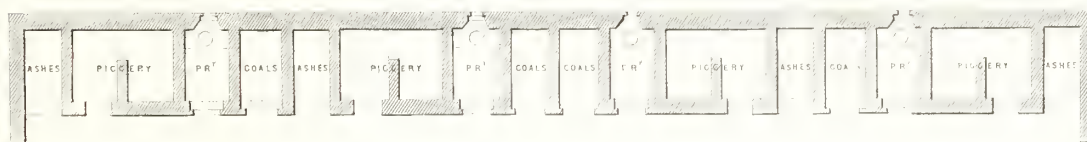
horizontally, and the corresponding ones in the bed-rooms to be hinged, and to open with a quadrant. A small roof-light may be placed above the lumber-closet, from which a borrowed light can be taken to the staircase.

The elevation is seen in Plate IX.

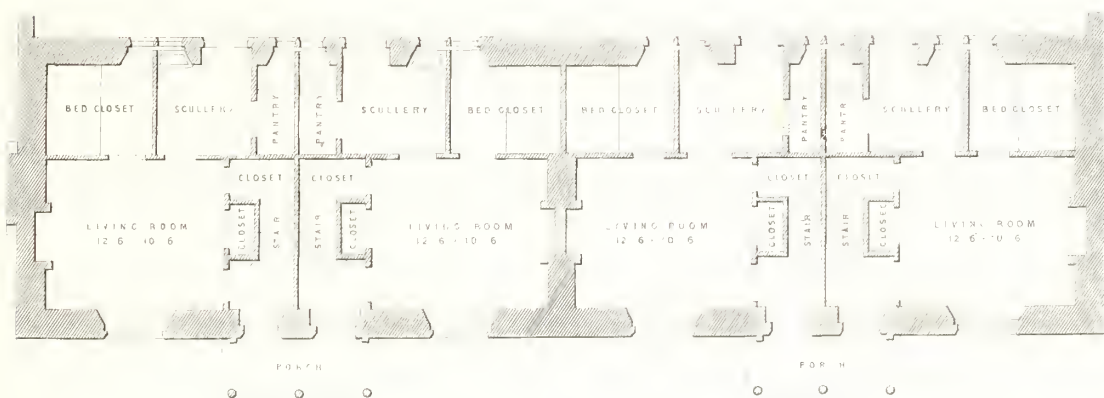
The estimated cost is about £500.



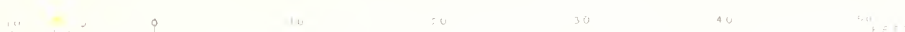
PLAN OF THE UPPER FLOOR

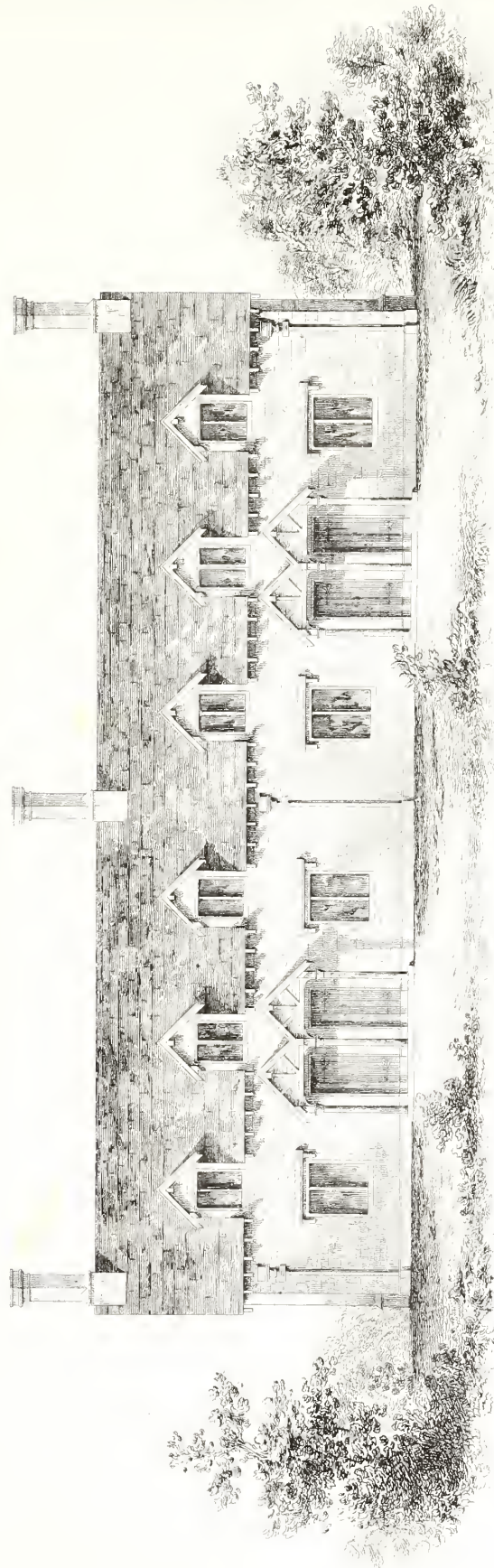


COURT



PLAN OF THE GROUND FLOOR





FRONT ELEVATION



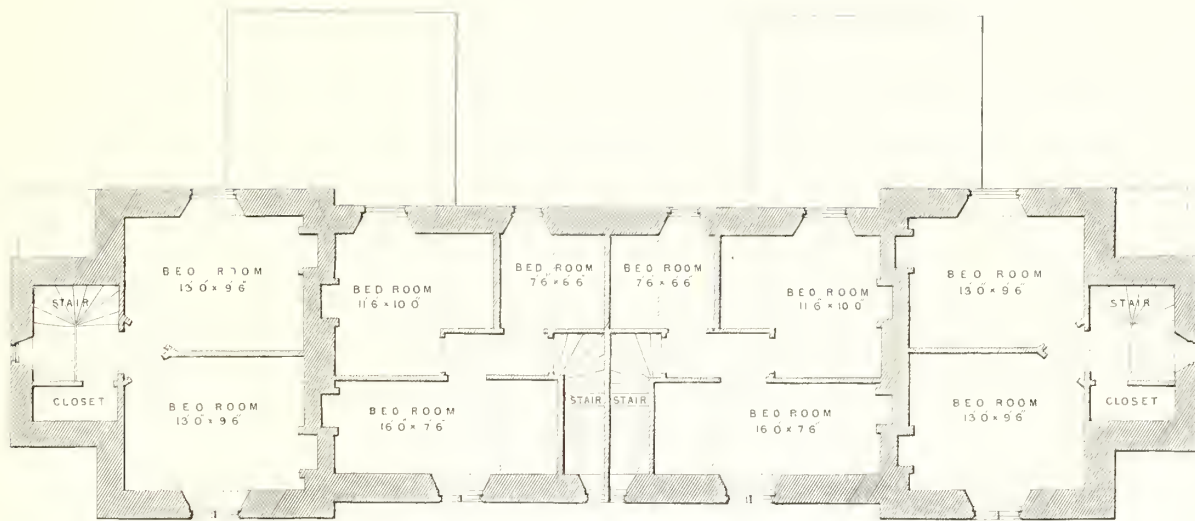
PLATES X. AND XI.

A ROW OF TWO-STORY COTTAGES. No. 2.

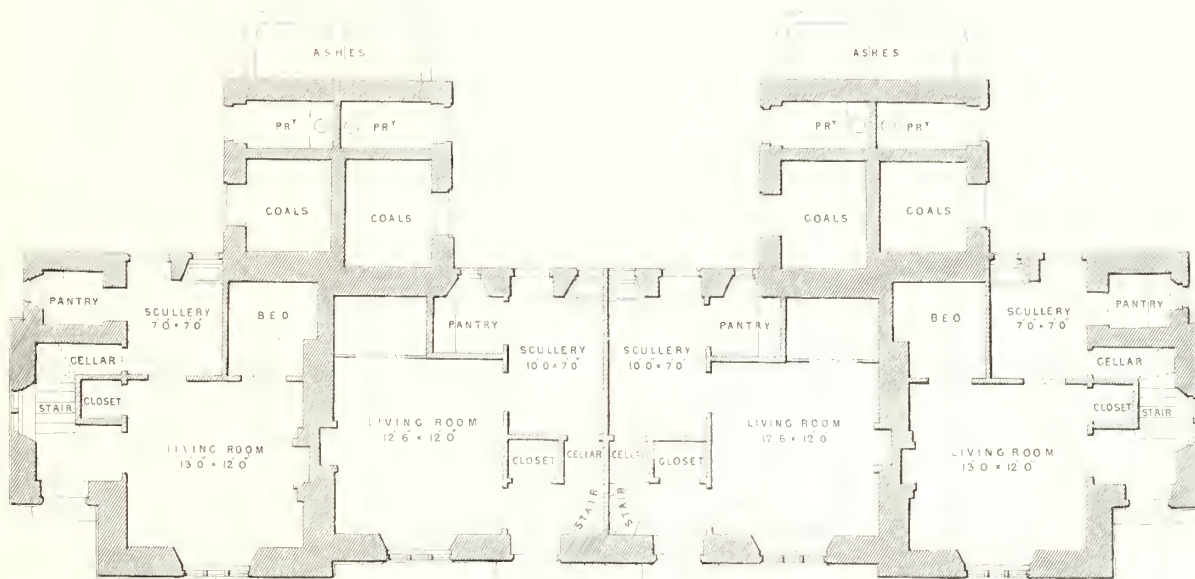
THIS group of Cottages, although the rooms are of smaller size than those described in Plate VIII., contains within each dwelling precisely the same accommodation. The largest bed-room on the upper floor may, if more separate sleeping-places are required, be divided, and thus afford for each Cottage all the advantages of four bed-rooms.

The elevation, which will be found in Plate XI., may be considered picturesque when compared with that of Plate IX., while the general effect is heightened by the addition of the porch and dressed chimney-shafts.

The estimated cost is about £587.

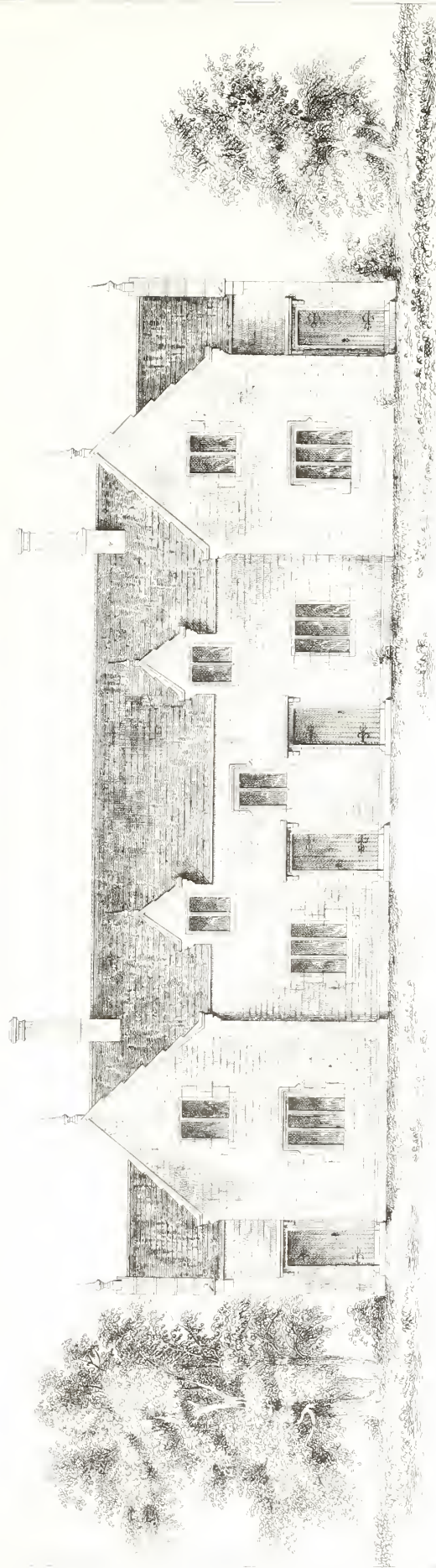


PLAN OF THE BEDROOM FLOOR



PLAN OF THE GROUND FLOOR

10 5 0 10 20 30 40 50 FEET



FRONT ELEVATION



PLATES XII. AND XIII.

FOUR TWO-STORY COTTAGES.

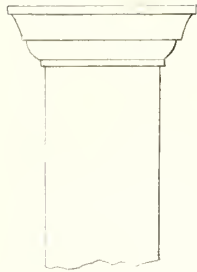
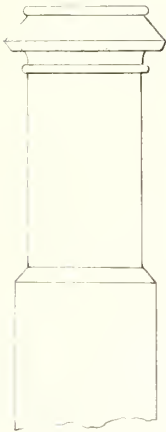
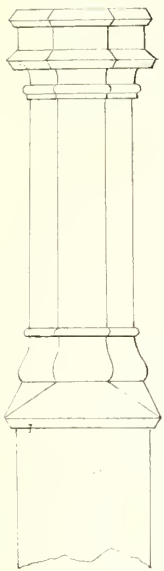
THE accommodation afforded in the two central Cottages of this group is precisely the same as in Plate X.; but the arrangement is in some degree altered to suit the external form of the building. In the end Cottages, there are only two bed-rooms on the upper floor, but which are of larger size than in the central dwellings.

The elevation (Plate XIII.) shews the style of Cottage architecture which may be called Scottish. It is pleasing, simple, and substantial, and admits of ornamental detail in a greater or less degree. In the example here given, the stone dressings may be omitted, where strict economy is desired; but as the details (see Plate XIV.) are extremely simple, the expense will be comparatively small, and their omission would partially destroy the harmony which prevails in the general elevation.

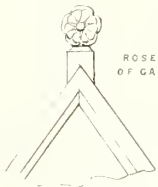
The estimated cost is about £605.

DETAILS OF COTTAGES

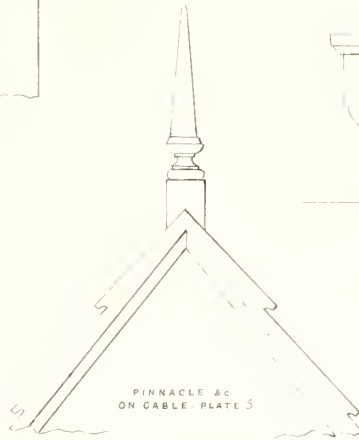
PLATE XIV



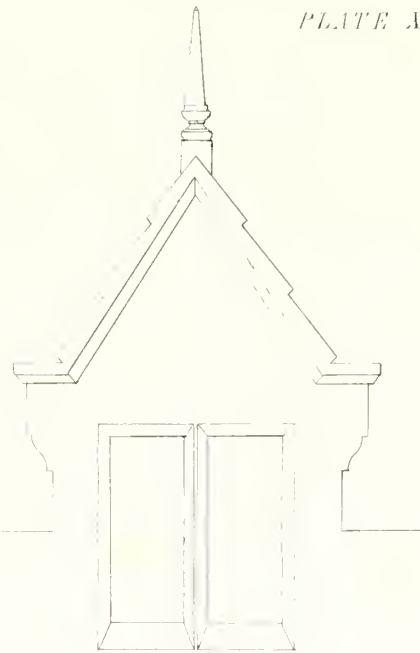
CHIMNEY STALKS ON COTTAGES



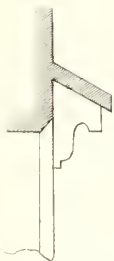
ROSETTE ON TOP OF GABLE, PLATE 5



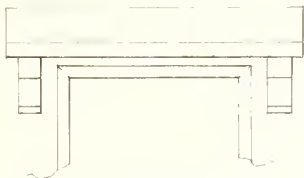
PINNACLE & C ON CABLE, PLATE 5



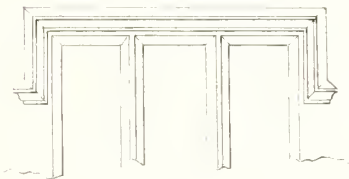
FRONT ELEVATION OF BEDROOM WINDOW PLATE 13



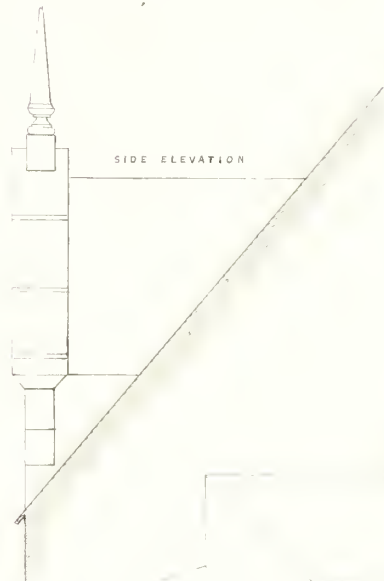
SECTION OF WATER BARGE & SIDE VIEW OF CORBEL



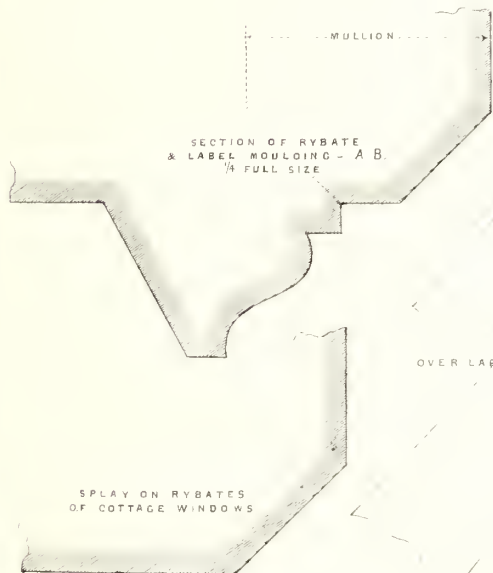
ELEVATION OF WATER BARGE OVER DOORS & WINDOWS OF COTTAGES



ELEVATION OF TOP OF LOWER WINDOWS, PLATE 13



SIDE ELEVATION



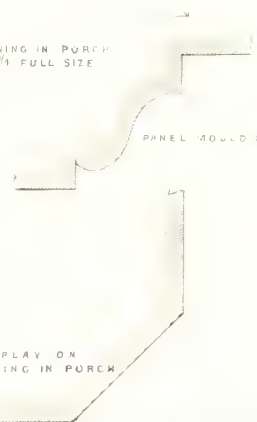
SECTION OF RYBATE & LABEL MOULDING - A B. 1/4 FULL SIZE



PROFILE OF SKEW FULL SIZE

OVER LAP ON SKEW

ANGLE OF OPENING IN PORCH PLATE 7. 1/4 FULL SIZE



PANEL MOULDING

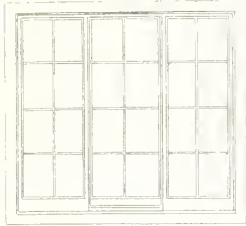
SPLAY ON RYBATES OF COTTAGE WINDOWS

SPLAY ON OPENING IN PORCH

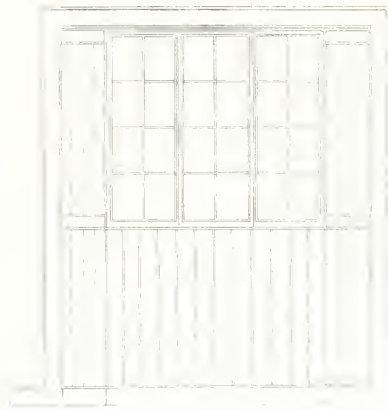
12 6 0 1 2 3 4 5 6 7 8 9 10 FEET

DRUCK - 1/4

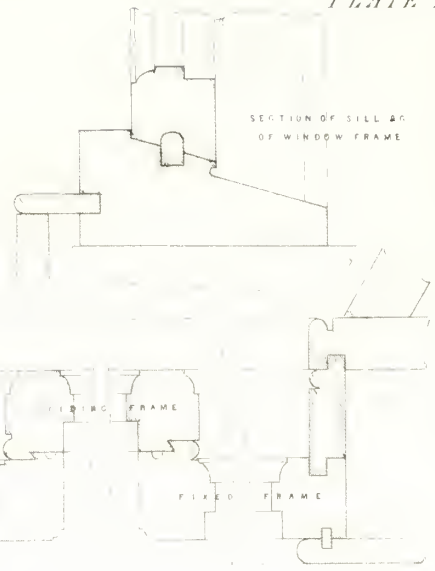
EXTERIOR ELEVATION
OF WINDOW



INTERIOR ELEVATION
OF WINDOW

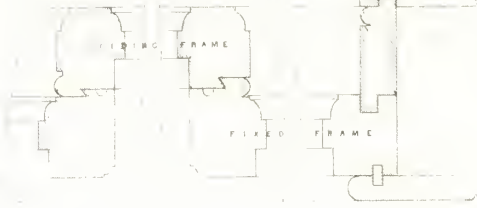


SECTION OF SILL &
OF WINDOW FRAME



PLAN OF WINDOW

DETAILS OF WINDOW FRAMES



FACING ROUND
DOORS & WINDOWS



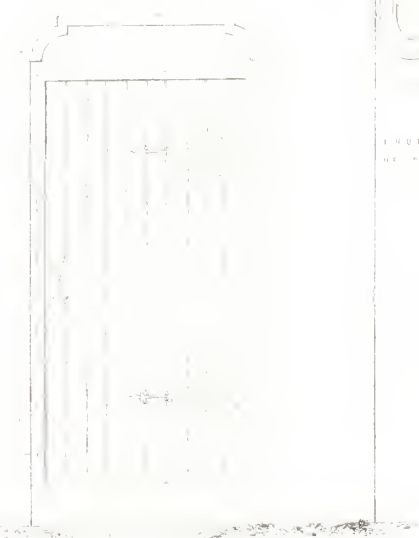
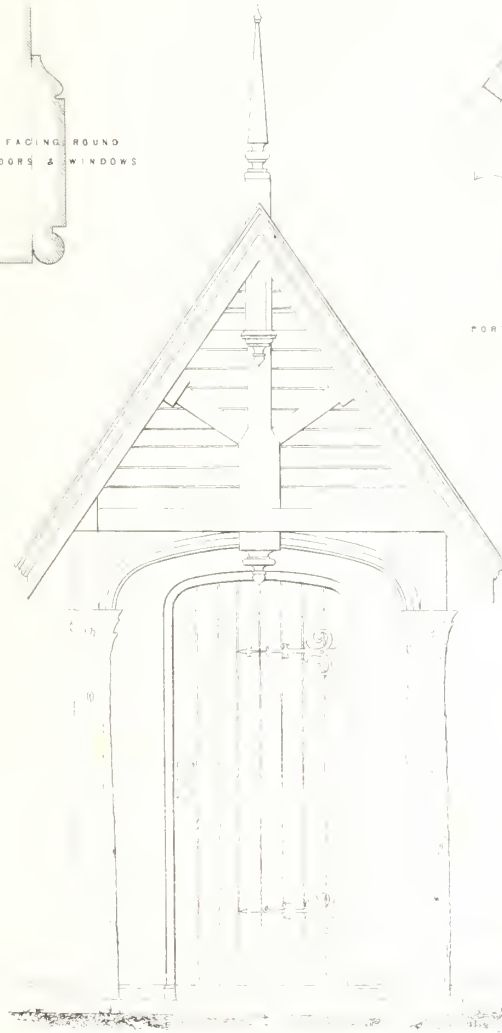
PORTALS OF PRINCIPAL
ROOF AT LEVEL



SIDE ELEVATION



FRONT ELEVATION
OF PORCH PLATE

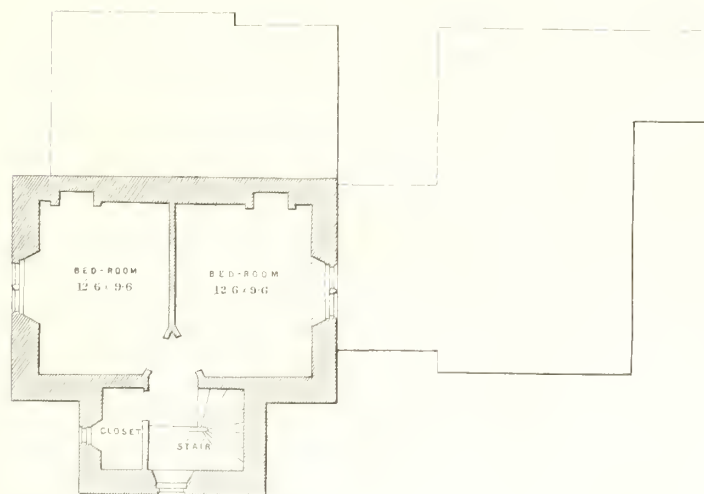


PLATES XIV. AND XV.

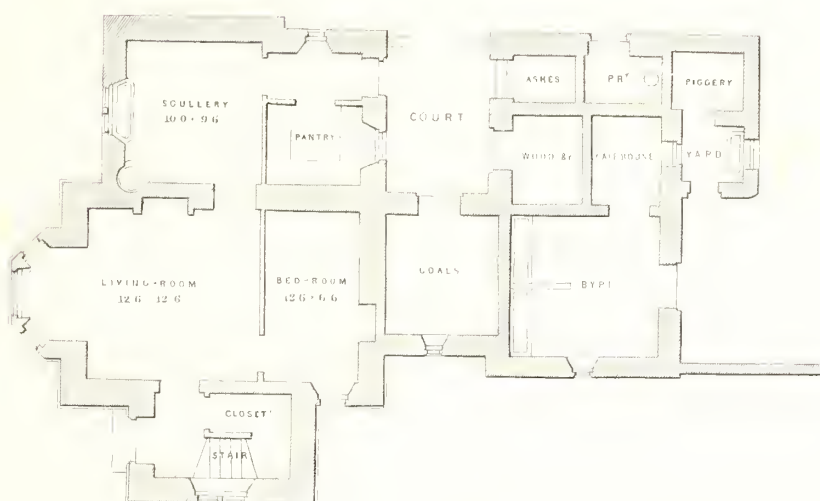
GENERAL DETAILS OF STONE DRESSINGS, &c., IN COTTAGES.

CONTAINED IN PLATES I. TO XIII.

THESE details are fully explained by the Plates. In reference to the Chimney-shafts, where economy is an object, artificial stone may be substituted. In addition to the patterns here given, many elegant designs may be obtained of the various manufacturers.



PLAN OF THE BEDROOM FLOOR



PLAN OF THE GROUND FLOOR





ENTRANCE ELEVATION



SIDE ELEVATION

10 5 0 10 20 30 40 50 FEET

PLATES XVI. AND XVII.

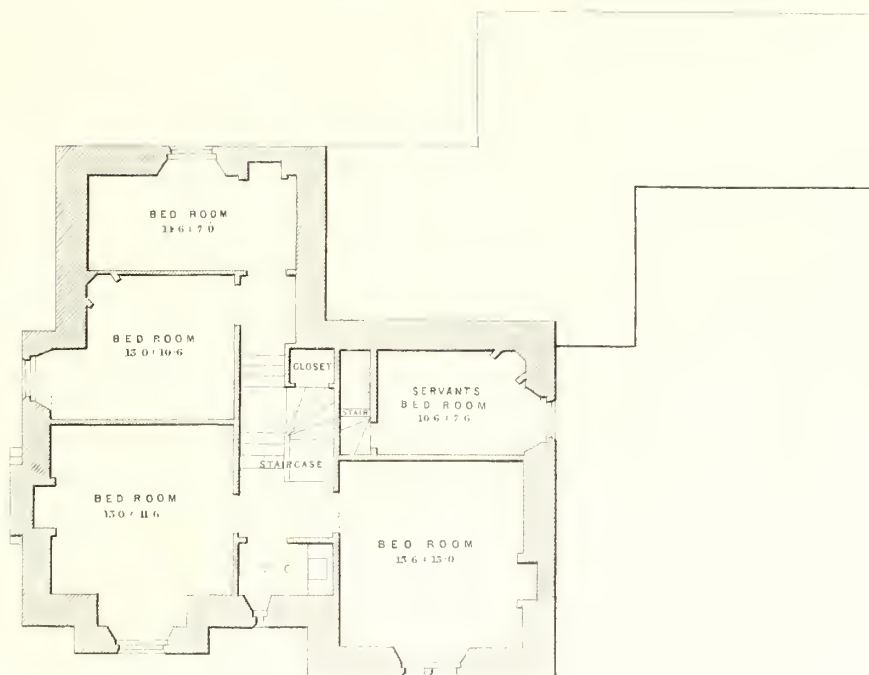
A LAND-STEWARD OR BAILIFF'S HOUSE.

ALTHOUGH characterized by all the formalities of detail which are inseparable from this style of architecture, the manner in which the various parts are broken up secures that irregularity of outline, without which the appearance of the house would be formal and uninviting. A porch, somewhat similar to that in Plate VII., may, if desired, be added, with advantage to the general effect.

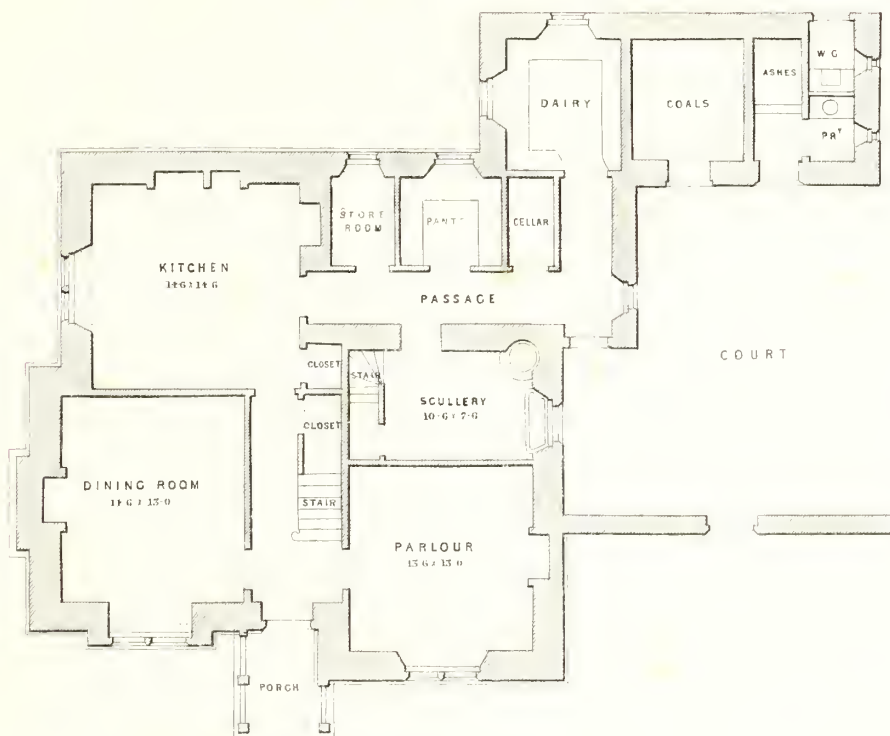
The accommodation consists of a living-room, $12\frac{1}{2}$ feet square, with recess 4 feet deep for oriel window ; a small bed-room adjoins, $12\frac{1}{2} \times 6\frac{1}{2}$ feet. The scullery, $10 \times 9\frac{1}{2}$ feet, is at the back of the living-room, and is fitted with boiler and sink. A passage, opening into which is the pantry, leads from the scullery to the back door. On the upper story are two bed-rooms, $12\frac{1}{2} \times 9\frac{1}{2}$ feet each, and a large press.

The offices comprise coal- and wood-cellars, a place for ashes, privy, a two-stalled byre, calf-house, and piggery.

The estimated cost is about £305.



PLAN OF THE BEDROOM FLOOR



PLAN OF THE GROUND FLOOR

10 5 0 10 20 30 40 50 FEET



SIDE ELEVATION



ENTRANCE ELEVATION



PLATES XVIII. AND XIX.

DESIGN FOR A FARM-HOUSE. No. 1.

THIS design, which will be found very complete in its details, and affording all desirable conveniences to the family of a small farmer, may be considered as adapted to the farm buildings detailed in Plates XLV. to XLVII.

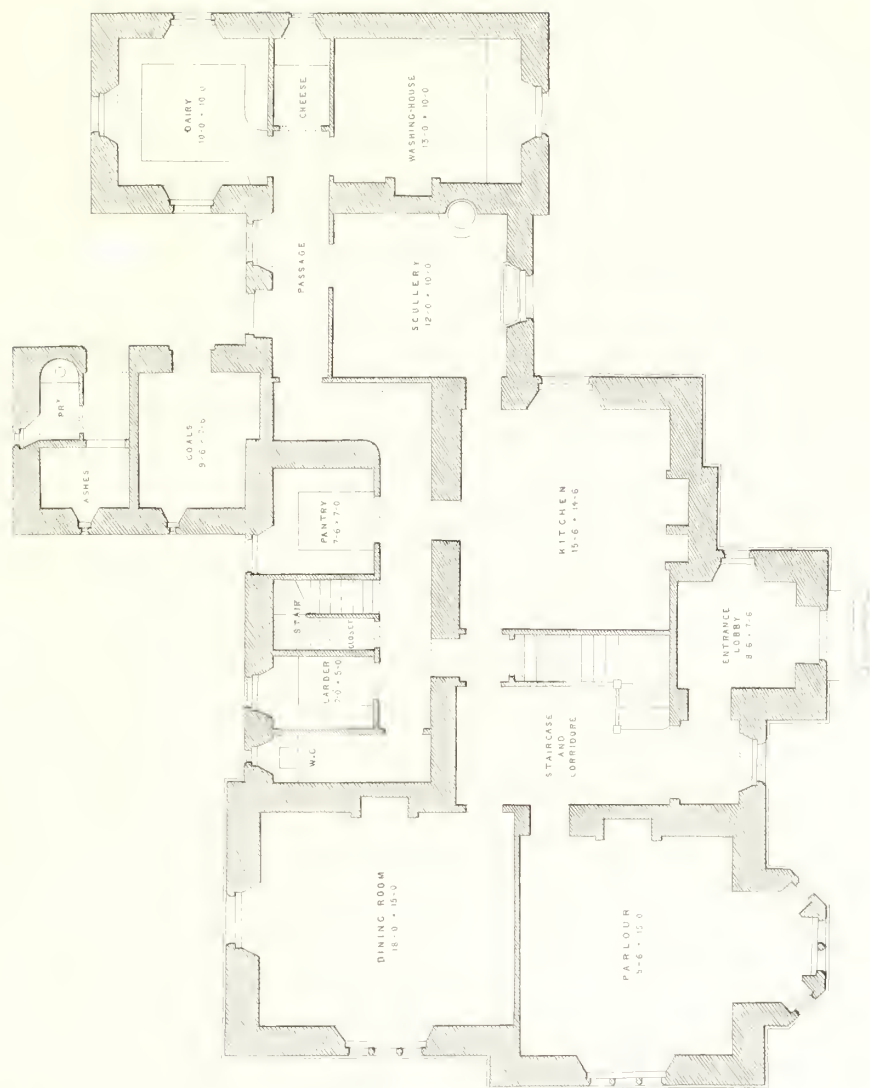
Entering by a porch we have, on the left hand, a dining-room, and on the right a parlour or drawing-room, as may best suit the taste of the occupier. At the end of the lobby, facing the entrance porch, is the kitchen. From the kitchen, at right angles with the entrance lobby, is a passage, giving access to a store-room, pantry, scullery, dairy, and cellar, and leading by a doorway to the court, in which is a coal-cellar, ash-pit, privy, and water-closet. From the scullery a stair leads to the servants' bed-room.

The bed-room story contains two good-sized rooms, and two smaller ones. There are also a convenient clothes-press and a water-closet, the latter capable of being fitted with a bath.

The servants' bed-room is upon this floor, but with a separate access, as before noticed, from the scullery.

The elevation will be found in Plate XIX.

The estimated cost is about £540.



PLAN OF THE GROUND FLOOR



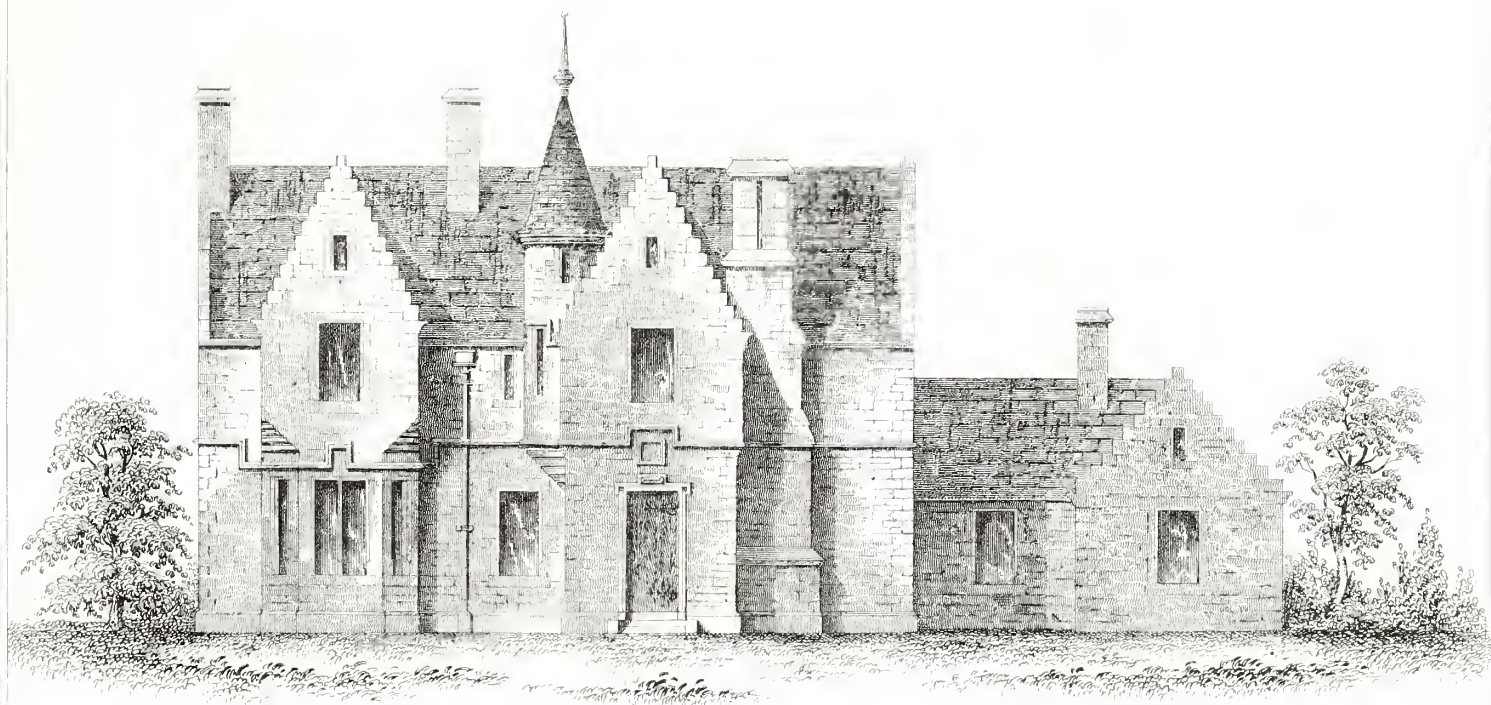


PLAN OF THE BEDROOM FLOOR





END ELEVATION



ENTRANCE ELEVATION

10 5 0 10 20 30 40 50 FEET



PERSPECTIVE VIEW



STONE DETAILS

INTERIOR ELEVATION OF ONE HALF OF ORIEL WINDOW

EXTERIOR ELEVATION OF ONE HALF OF ORIEL WINDOW

MILLION

PLAN OF WINDOW SASH, CASE &c.

ARCHITRAVE ROUND ORIEL WINDOW

MOULDING ON ANGLE OF PIERS

ARCHITRAVE FOR BEDROOM DOORS

ARCHITRAVE FOR PRINCIPAL ROOM DOORS

PLAN OF ORIEL WINDOW SHEWING THE FINISHINGS

FACING DOORS IN FOR OFFICES

ELEVATION OF ONE OF THE DOORS FOR PRINCIPAL ROOMS

BASE MOULDING FOR PRINCIPAL ROOMS

BASE MOULDING FOR BEDROOMS

MOULDING ON PRINCIPAL ROOM DOORS

MOULDINGS ON SHUTTERS OF PRINCIPAL ROOMS

MOULDING ON BEDROOM DOORS

PLATES XX. TO XXV.

DESIGN FOR A FARM-HOUSE. No. 2.

THIS design is so carefully and completely illustrated by the six Plates, as to render much explanation unnecessary.

Plate XX. shews the ground floor. It contains an entrance lobby, giving access to a commodious corridor and staircase. On the left is a parlour or drawing-room, lighted by two windows, one of which is an oriel. Adjoining the parlour is a dining-room, also with two windows. Returning to the corridor, we pass under the landing of the first flight of stairs to the kitchen, entering from which is the scullery. From the corridor, also, a door next to that of the kitchen leads to the back passage, in which is a water-closet, larder, pantry, dairy, cheese-room, and laundry, together with a stair to servants' bed-room. There is an outside door from the back passage to the court, in which is a coal-cellar, ash-pit, and servants' closet.

Plate XXI. gives the bed-room flat, which contains five sleeping-rooms, one of which gives access to the closet in the turret. There are also a water-closet, a housemaid's closet, and two linen closets. The small bed-room, which enters from the door at the head of the staircase, may, if desired, be converted to a bath-room.

PLATES XX. to XXV.—DESIGN FOR A FARM-HOUSE. No. 2.

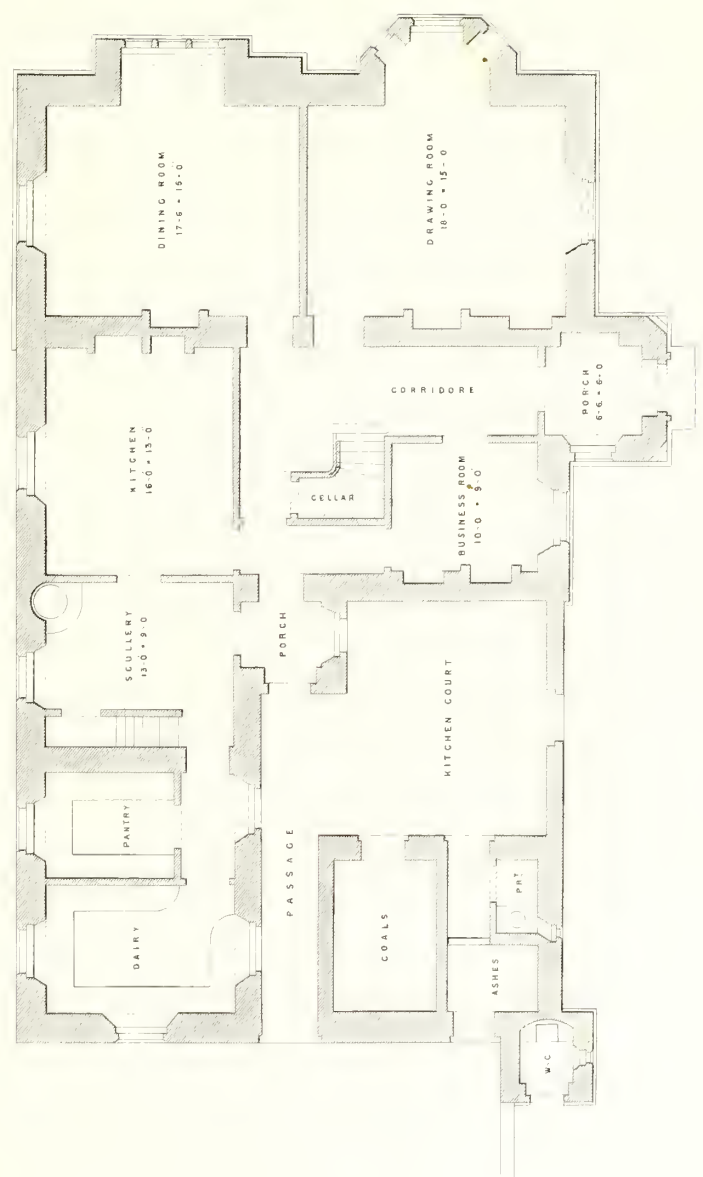
Plate XXII. shews the end and entrance elevations.

Plate XXIII. a perspective view, from which a comprehensive idea may be formed as to the general effect. The style may be described as the Scottish Baronial modernized.

Plate XXIV. represents the stone-dressings in detail ; and elevations, on a large scale, of the entrance door and tympanum window.

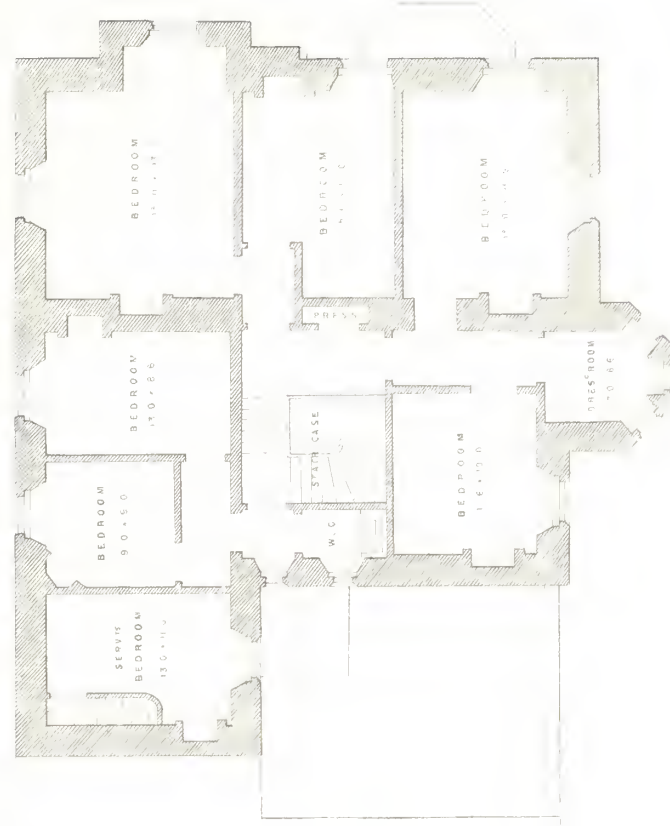
Plate XXV. shews the timber details to a scale of one-fourth of the real size. The plan and interior and exterior elevations of oriel window are likewise given ; also elevation of one of the doors for the principal rooms.

The estimated cost is about £1250.



PLAN OF THE GROUND FLOOR





PLAN OF THE BEDROOM FLOOR





SIDE ELEVATION



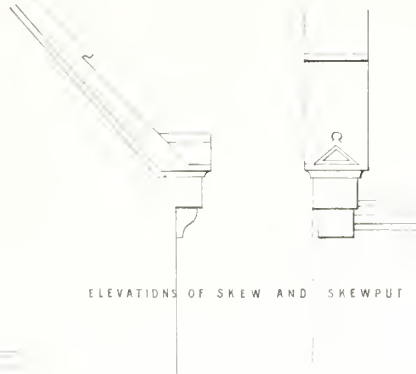
ENTRANCE ELEVATION

10 5 0 10 20 30 40 50 FEET





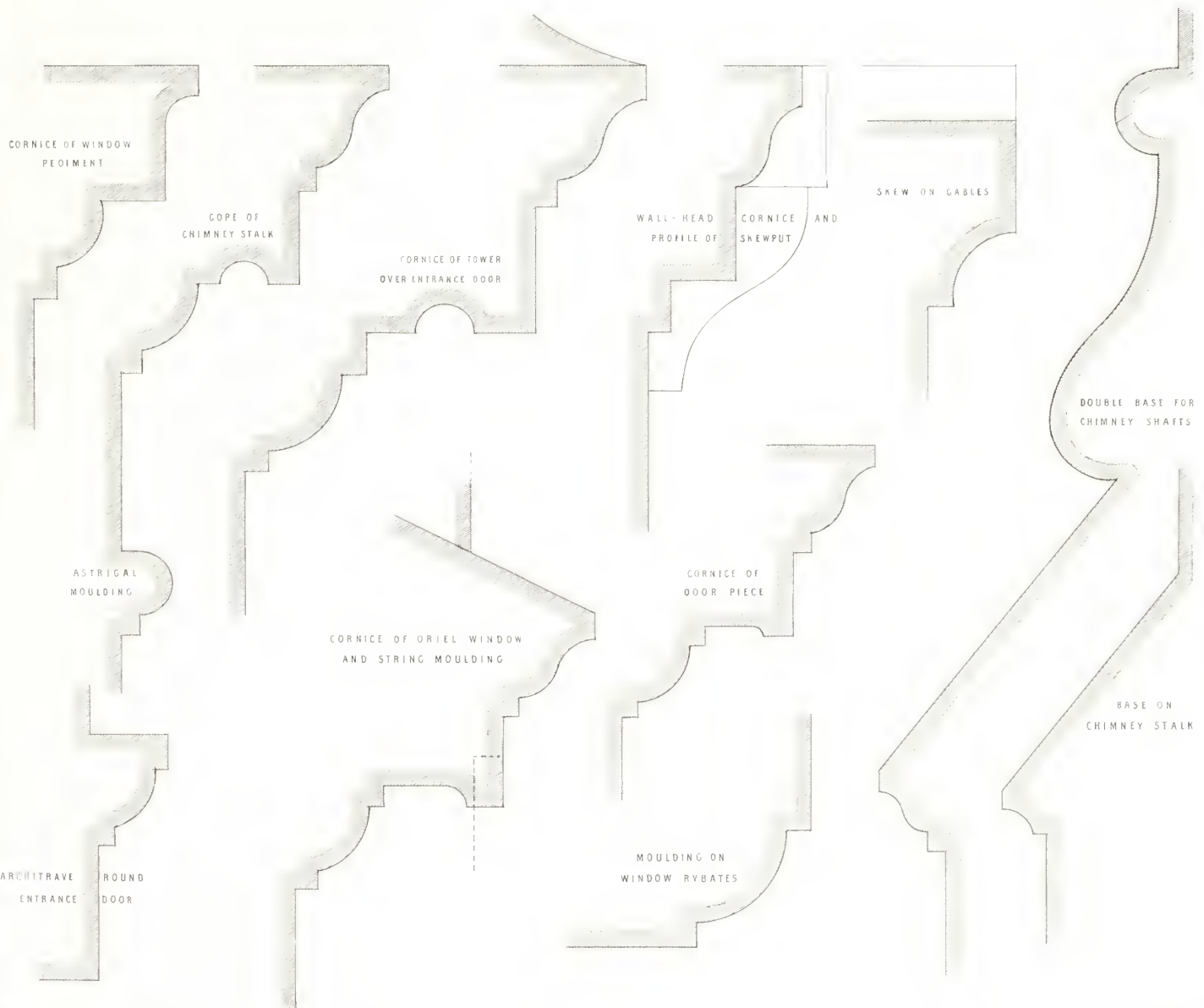
ELEVATION OF ONE OF THE PEDIMENTS
OVER BEDROOM WINDOWS



ELEVATIONS OF SKEW AND SKEWPUT



ELEVATION OF UPPER PART OF
DOOR PIECE



STONE MOULDINGS $\frac{1}{4}$ FULL SIZE

PLATES XXVI. TO XXX.

DESIGN FOR A FARM-HOUSE. No. 3.

THE plans, elevations, perspective view, and general details of this residence are contained in five Plates.

Plate XXVI. represents the ground-floor plan. After passing the porch, which is lighted by a side window, we enter a passage or corridor. On the left is a small business room or library, which also contains a door leading to the back porch. On the right of the corridor is the drawing-room, lit by a plain window and an oriel. Adjoining is the dining-room. Returning to the corridor, we enter a door, under the landing of the first flight of stairs, which gives access to the back porch. Before entering this porch, on the right hand, is the kitchen, a door from which opens into the scullery. A stair leads from the scullery to the servants' bed-room, which is situated immediately above. A pantry and dairy adjoin the scullery. In the kitchen court is a coal-cellar, ash-pit, and servants' closet. A water-closet is contained in the quadrangular turret, which abuts on the offices.

Plate XXVII. contains plan of bed-room floor, which affords the accommodation of six sleeping apartments, a dressing-closet over the porch, a water-closet, and linen-press.

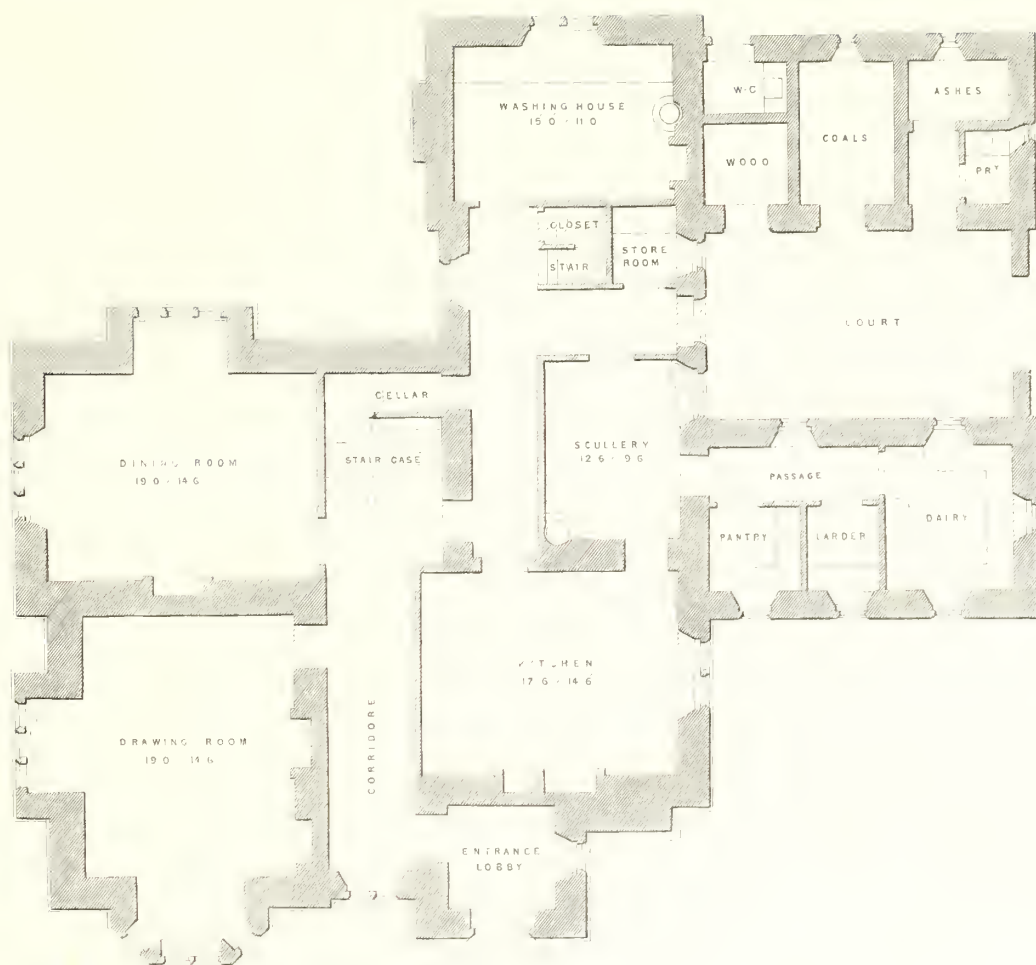
PLATES XXVI. TO XXX.—DESIGN FOR A FARM-HOUSE. No. 3.

Plate XXVIII. gives the side and entrance elevations.

Plate XXIX., a perspective view of the same, in which the general outline of the building is more clearly and naturally defined.

Plate XXX. contains the stone details, drawn to one-fourth of full size, together with elevation of one of the pediments over bed-room window, and also of entrance door.

The estimated cost is about £1175.



PLAN OF THE GROUND FLOOR





PLAN OF THE BEDROOM FLOOR

10 5 0 10 20 30 40 50 FEET



SIDE ELEVATION



ENTRANCE ELEVATION





PERSPECTIVE VIEW

PLATE XXV



PLATES XXXI. TO XXXV.

DESIGN FOR A FARM-HOUSE. No. 4.

THIS design, which is elaborated in five Plates, is more complete in its general details than either No. 2 or No. 3. It partakes of the best characteristics of the conventional English style of rural architecture, and is specially adapted for a suburban locality.

Plate XXXI. shews the ground floor. The entrance lobby gives access to the corridor or passage, on the left of which are the drawing- and dining-rooms, each measuring $19 \times 14\frac{1}{2}$ feet, exclusive of the window recesses. At the end of the corridor is a door opening into the back passage, which leads to the kitchen, $12\frac{1}{2} \times 14\frac{1}{2}$ feet, adjoining which are the scullery, pantry, larder, and dairy. At the end of the back passage is a washing-house or laundry, fitted with boiler, &c. The offices comprise wood- and coal-cellars, place for ashes, water-closet, and privy.

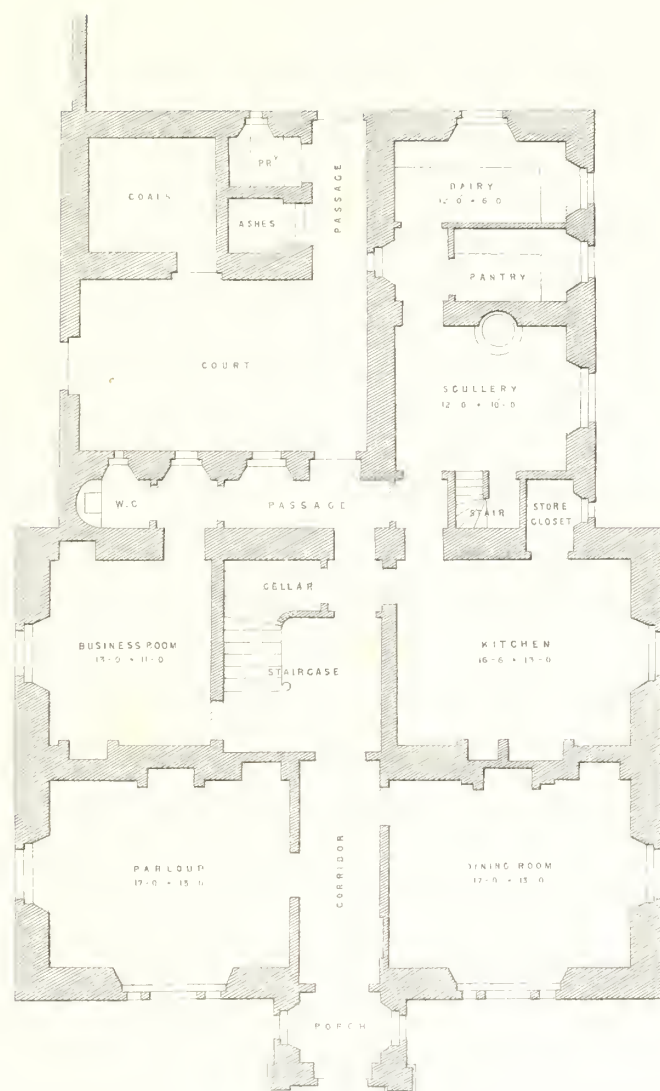
Plate XXXII., bed-room story. The accommodation on this floor consists of six bed-rooms, a dressing-room, bath, and water-closet, together with linen and other presses.

Plate XXXIII. gives the side and entrance elevations.

Plate XXXIV., a general perspective view.

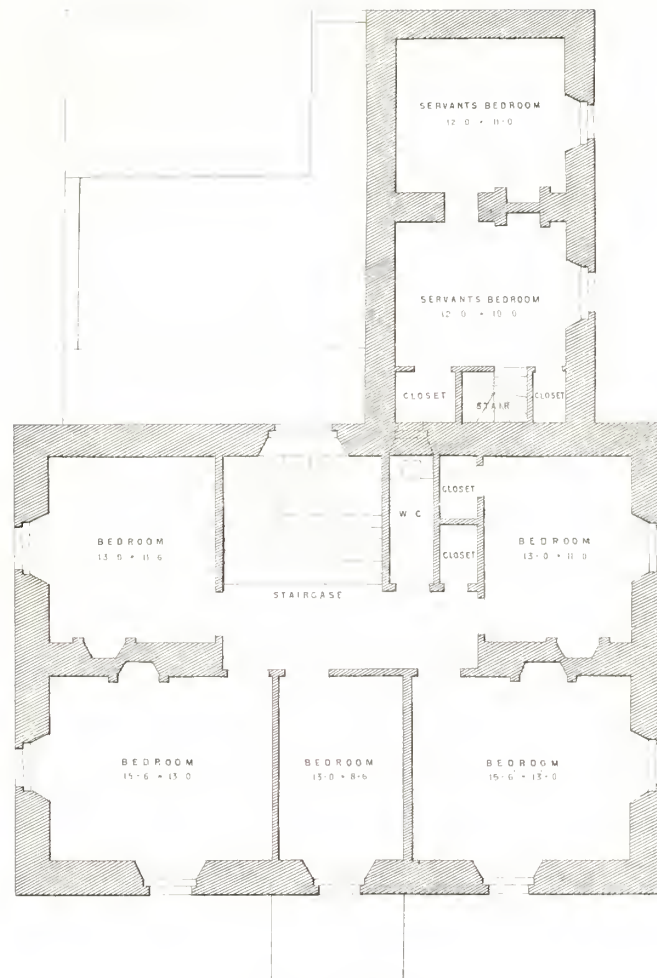
Plate XXXV., details of construction.

The estimated cost is £1260.



PLAN OF THE GROUND FLOOR





PLAN OF THE BEDROOM FLOOR





FRONT ELEVATION



END ELEVATION

10 5 0 10 20 30 40 50 FEET

PLATES XXXVI. TO XXXVIII.

DESIGN FOR A FACTOR'S HOUSE.

ON an extensive estate, and especially when the proprietor is non-resident, the services of a gentleman of education and intelligence are required in the capacity of general superintendent. The person filling such an office is called, in Scotland, the Factor; in England he is known as the Steward; and, in Ireland, as the Agent. From the responsibility attached to the office, the social position of the person filling it must be maintained on an equality, at least, with that of the wealthiest tenant on the estate. Hence the necessity of a dwelling of the first class for the residence of his family. In the example here given, these considerations are kept in view.

The ground floor (shewn in Plate XXXVI.) contains a porch, lighted by side windows, opening into the corridor; to the right and left of which are the dining-room and parlour, each 17×13 feet. The staircase, lighted by a dome, is in the centre of the house. A business-room or library, 13×11 feet, is at the back of the parlour. The entrance to the kitchen is by a door under the landing-place of the first flight of stairs. In the kitchen is a store-closet with window. A second door in the kitchen gives access to the scullery, pantry, and dairy, and also to the back passage. From the scullery a stair leads to the servants' bed-rooms.

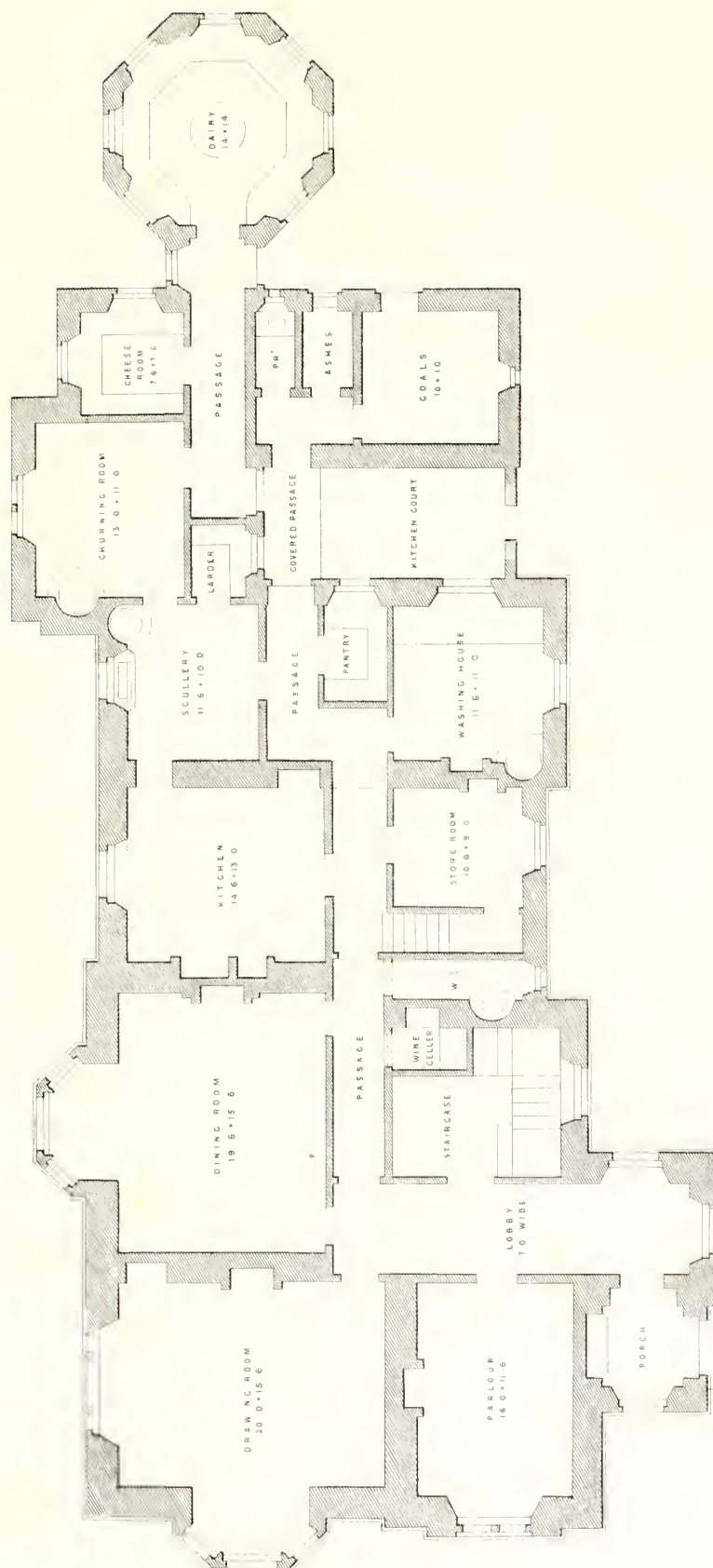
PLATES XXXVI. to XXXVIII.—DESIGN FOR A FACTOR'S HOUSE.

There is a court at the back, with coal-cellar, place for ashes, and servants' closet.

On the bed-room floor (Plate XXXVII.) are five apartments (four of which have fire-places), two presses, and a water-closet, besides two rooms for the servants, which are reached by the stair in scullery, as previously mentioned.

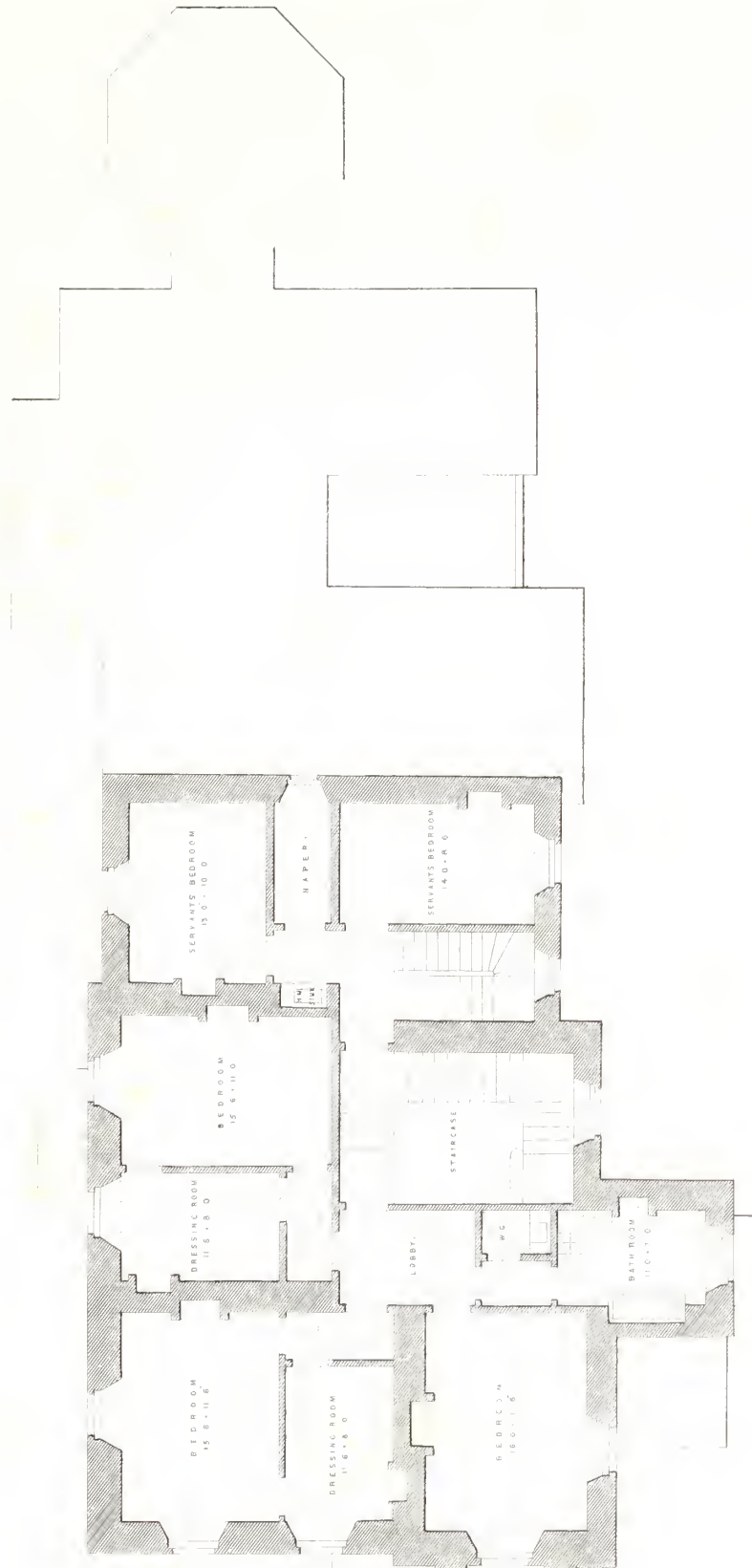
In the general appearance of the house (the front and side elevations of which are seen in Plate XXXVIII.) nothing is aimed at beyond securing a substantial and elegant exterior, united with simplicity of detail and harmony of parts.

The estimated cost is about £1020.



PLAN OF THE GROUND FLOOR





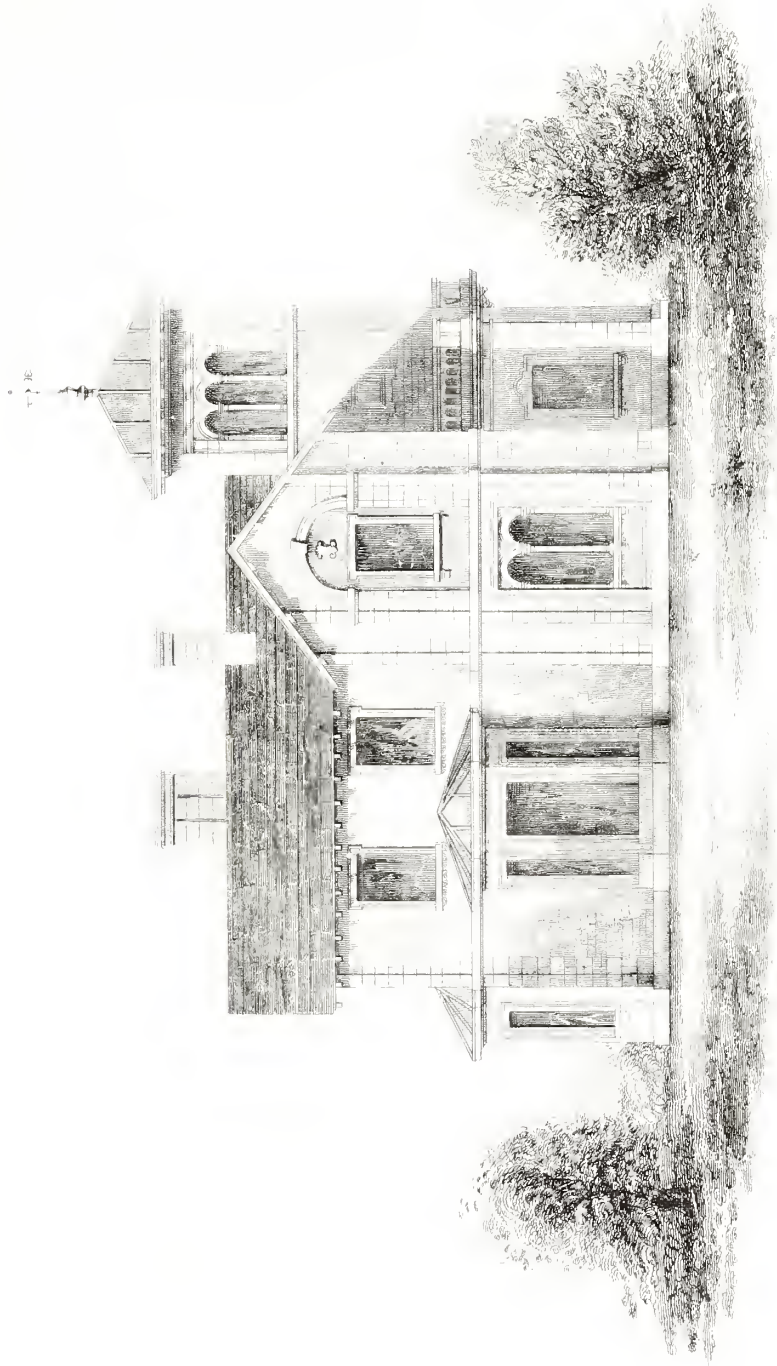
PLAN OF THE BEDROOM FLOOR





FRONT ELEVATION



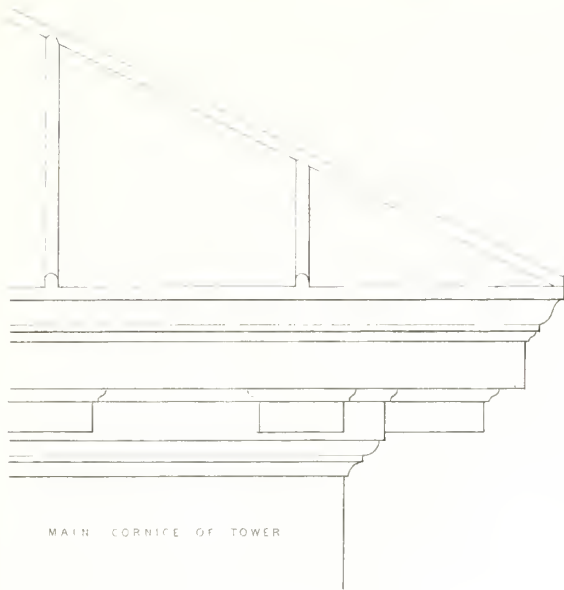


END ELEVATION

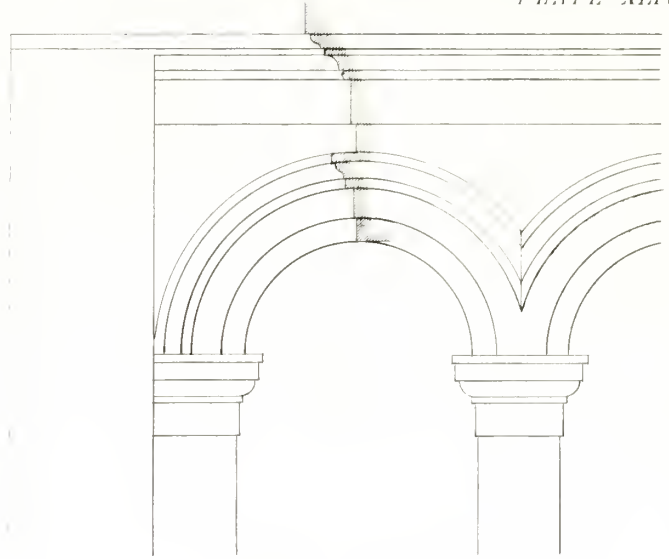




PERSPECTIVE VIEW



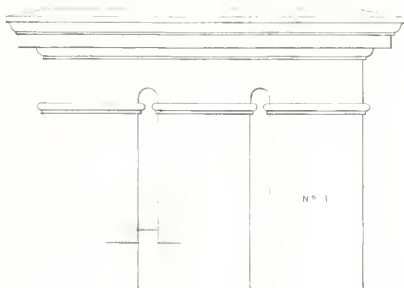
MAIN CORNICE OF TOWER



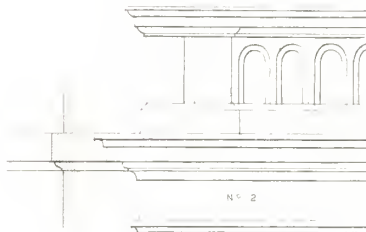
PART OF WINDOW IN TOWER



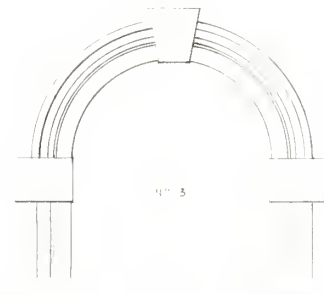
SCALE TO CORNICE AND WINDOW IN TOWER



ELEVATION OF ONE OF THE CHIMNEY STALKS



CORNICE AND BALUSTRADE OF PORCH



UPPER PART OF CORRIDOR WINDOW



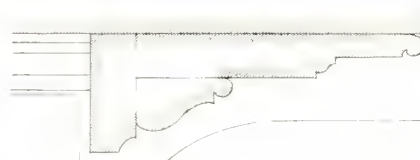
SCALE TO NOS 1, 2, 3 AND 4



ELEVATION OF DOOR FOR PRINCIPAL APARTMENTS

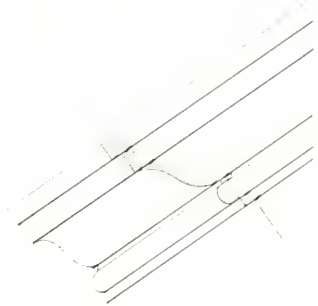


PANEL MOULDING OF DOOR
1/4 FULL SIZE



ARCHITRAVE FOR DOOR
1/4 FULL SIZE

BASE MOULDING
1/4 FULL SIZE



EDGE AND FABLE MOULDINGS
1/4 FULL SIZE

PLATES XXXIX. TO XLIV.

DESIGN FOR THE RESIDENCE OF A PROPRIETOR FARMING HIS OWN ESTATE.

It is no part of the present work to furnish designs for country residences irrespective of those in connexion with farming operations. That, however, now given may be considered to be the last link in the chain from the Labourer to the Proprietor. It is intended for the residence of one of that numerous class of landed gentry who manage their farming operations without the intervention of a factor or agent.

In Plate XXXIX. we have the ground-floor plan, containing porch and lobby, giving access to the parlour, $16 \times 11\frac{1}{2}$ feet, drawing-room, $20 \times 15\frac{1}{2}$ feet, and dining-room, $19\frac{1}{2} \times 15\frac{1}{2}$ feet, the two latter having bay windows. A passage, at right angles with the lobby, leads to the kitchen and offices. The latter comprise a store-room, scullery, larder, pantry, laundry, churning-room, cheese-room, and dairy; together with coal-cellar, place for ashes, and servants' closet. In the passage, underneath the principal staircase, is a wine-cellar; adjoining which are a water-closet and a back staircase to the dormitories of the servants.

On the bed-room floor (seen in Plate XL.) there are three sleeping apartments, two dressing-rooms or small bed-rooms, a bath-room, and water-closet. Two bed-

RESIDENCE OF A PROPRIETOR FARMING HIS OWN ESTATE.

rooms for the servants are also contained on this floor, but having a separate staircase, as previously mentioned. Adjoining these rooms are a linen press and housemaid's sink. A stair in the bath-room leads to the campanile or bell-tower, which may be fitted up for any purpose, according to the taste of the occupier.

In the elevation, as shewn in Plates XLI. and XLII., an attempt is made to adopt the more prominent features of the Italian style, the general effect of which is seen in the perspective view, Plate XLIII. The principal details of the stone dressings are given in Plate XLIV., together with some of the interior finishings.

The estimated cost of this house is £1750.

DIVISION II.

THE FARM-STEADING OR FARM-OFFICES.

PLATES XLV. TO XLVII.

THE principal objects to be attained in designing the offices of a farm, are, first, to get a maximum of room at a minimum of expense ; and, secondly, to have the different departments so arranged as to enable the farmer to carry on his daily operations with the fewest possible number of servants. An inspection of the Plans will shew how far they are in accordance with these principles.

In this Division of the work, as in the last, nothing further is attempted in the enumeration of details than mere general hints ; as no single specification, however carefully prepared, will suffice for every locality. A mere outline of the general style of work is therefore alone given, leaving the reader to understand that such parts as are not specially adverted to, are intended to be executed according to the most improved practice of the present day ; and that those features of the designs only that are either new in themselves, or improvements upon old systems, are more particularly noticed.

ARCHITECTURE OF THE FARM.

chamfer taken off the angles of the latter, and a groove cast on the former to receive the treviss boarding. The mangers to be of cast-iron or timber, and the racks, also, of cast-iron, made of a basket form, and fixed up in one angle of stall. The divisions of loose-boxes to be finished similar to stable trevisses, with timber posts 4 inches square.

The divisions of sheep-houses should be strongly framed, the posts next the passages being 4 inches square, fixed into stones at bottom ; the rails $4 \times 1\frac{1}{2}$ inches ; the spars and divisions, 3×1 inch, and 4 inches apart ; the troughs of $1\frac{1}{4}$ -inch wood, 10 inches broad inside at top, 7 inches at bottom, and 8 inches deep. A sparred frame along the troughs, placed at an angle, secured to the upper edge of the inside of the trough at the bottom, and to the posts at top, through which the sheep will have admittance to the trough. The top rail, $2\frac{1}{2} \times 1\frac{1}{4}$ inches, and the lower $1\frac{1}{2}$ inch square, and the frame and trough made moveable. The floor of pens 12 inches above the passage, framed with oak, 3×2 inches, having a rail in the centre, of the same size, and covered with spars, $2\frac{1}{4} \times 1\frac{1}{4}$ inches, and placed $\frac{7}{8}$ inch apart. Along each side of passage, below the floor of pens, there should be a moveable board, $11 \times 1\frac{1}{4}$ inches, for flushing out the manure.

The exterior of sheep-houses should have posts 5 inches square, secured to a beam at top, and into stones at bottom ; the rails, 3×2 inches, filled in with overlapped boarding, the upper portion made to slide, for light and ventilation.

The doors, in every situation where they would form an obstruction by opening on hinges, should be made to slide, having two small wheels at top, with malleable-iron straps secured to the top of doors ; the wheels being made to run on an iron guide, to have a stop at the side and bottom, and be provided with malleable-iron handles.

The various doors and windows to be finished in the usual way ; the lower half of the latter in the stables, byres, infirmaries, &c., filled in with two thicknesses

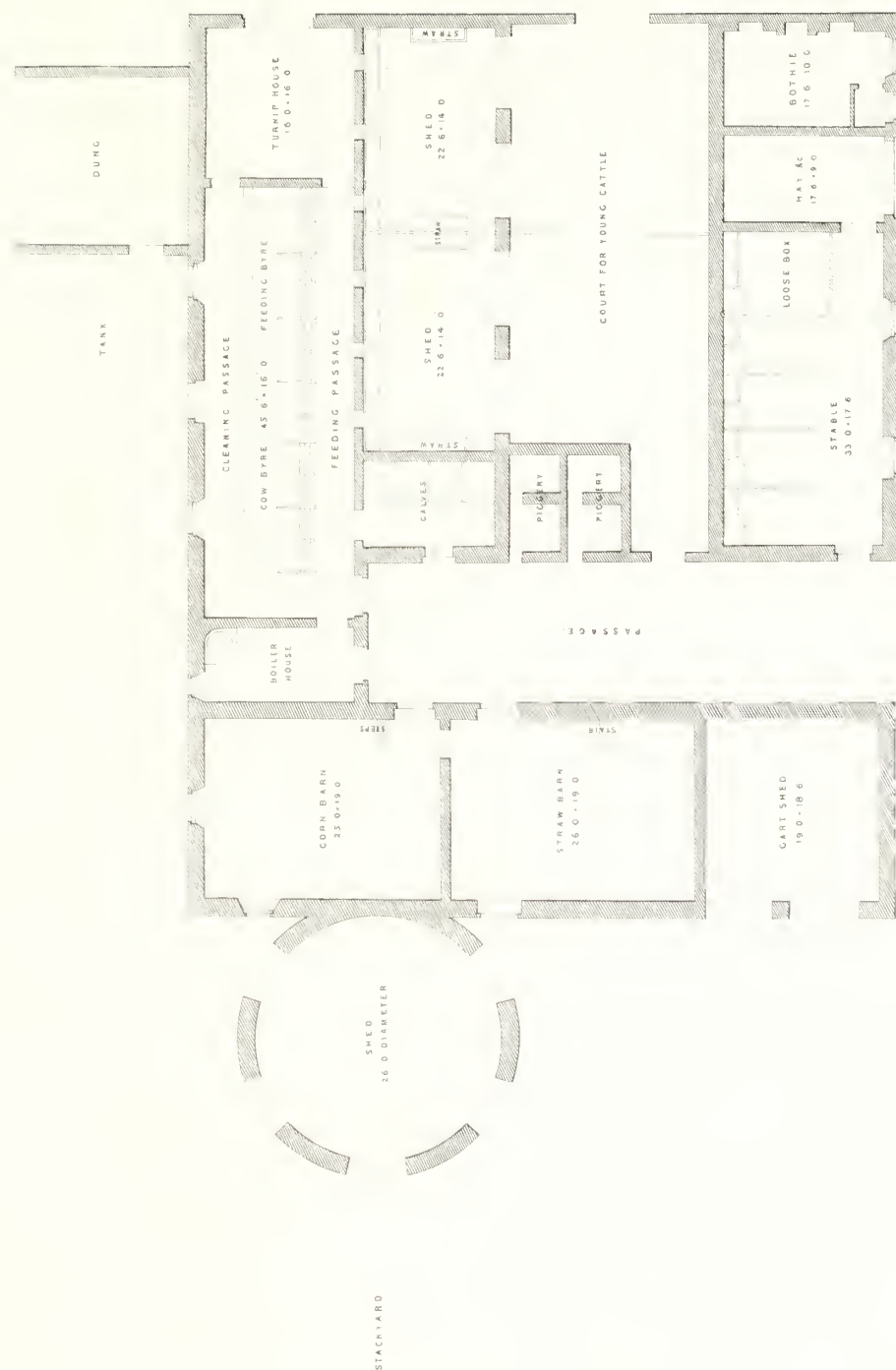
GENERAL DETAILS OF CONSTRUCTION.—DIV. II.

of open vertical sliding-boards $2\frac{1}{2} \times \frac{1}{2}$ inch, the outer one fixed ; and the windows in granaries, straw-lofts, sheaf-lofts, &c., entirely filled in with similar vertical louvre boarding ; and these windows, along with those of corn- and straw-barns, covered on the outside with strong wire netting.

The ventilators for byres and stables to be made of louvre boarding on the roof, and to have openings below each in the ceiling, provided with deal shutters, to open or close by cords and pulleys.

The skylights to be of glass tiles ; the ridges, peands, and whole plumber work of 22-oz. zinc ; the rain-water conductors in the one-story buildings, and 10 feet above the ground in those of two stories, being of cast-iron.

The slater and plaster work to be done in the usual way, except that care should be taken to have each course of slates shouldered with well-haired lime, and in very exposed situations to have each slate double nailed, and lead flashings on the chimney-shafts.



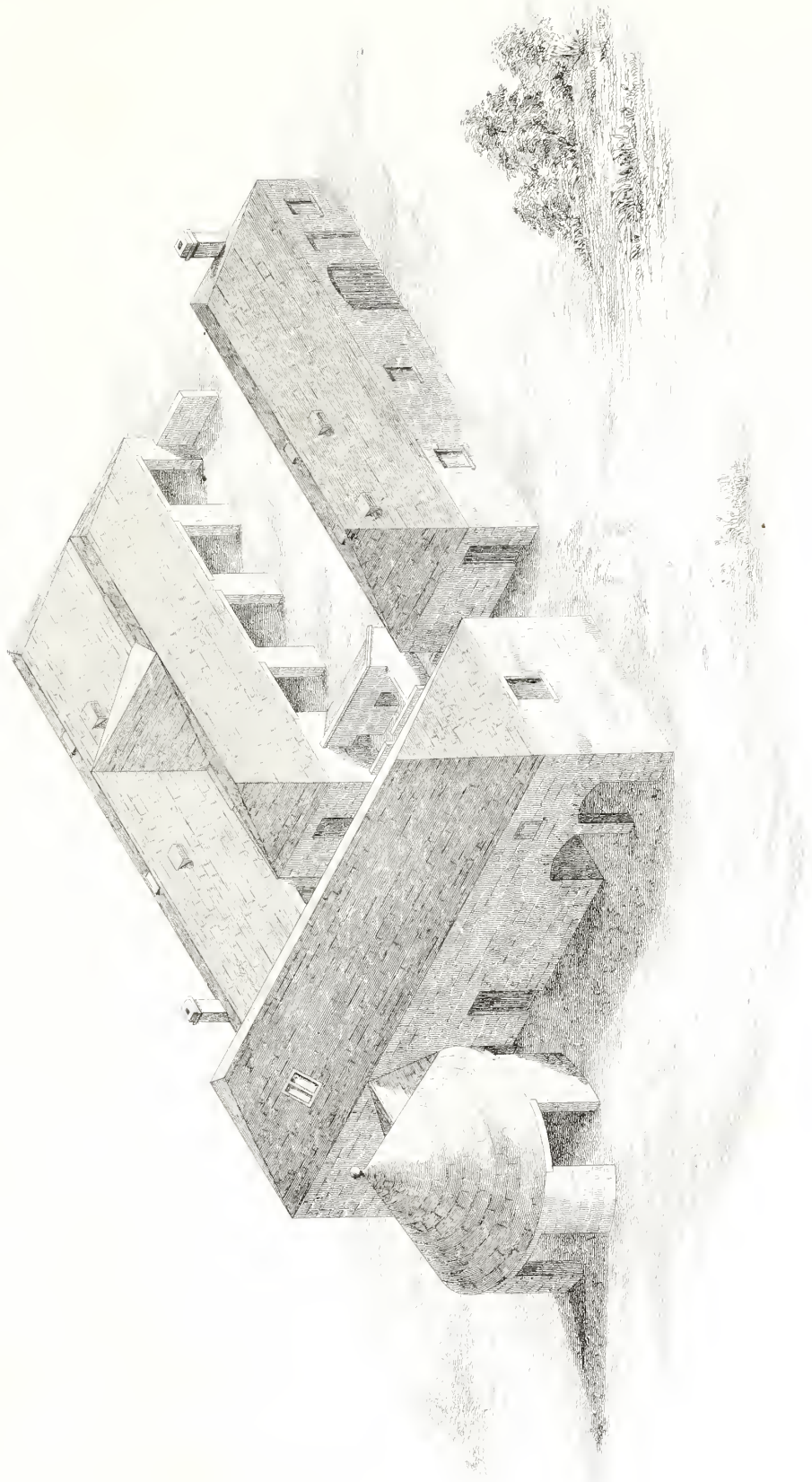
GROUND PLAN





PLAN OF GRANARY FLOOR SHEWING OUTLINE OF LOW BUILDINGS





ISOMETRICAL VIEW

PLATES XLV. TO XLVII.

DESIGN FOR A FARM-STEADING. No. 1.

THE present design is intended for a farm of limited extent, the work of which suffices for the employment of two pairs of horses, and where the thrashing-mill is driven by horse power.

The corn-barn is at the north-west corner of the range (see Plate XLV.), adjoining which is the covered shed for the horse-mill to impel the thrashing-machine. The straw-barn extends from the corn-barn to the cart-shed, which terminates the south-western extremity of the building. Over the corn-barn (see Plate XLVI.) is placed the sheaf-loft and machinery; and the granary is immediately over the cart-shed.

The boiler-house and steaming apparatus are in an apartment to the east of the corn-barn; and the cow and feeding byres adjoin. The turnip-house is situated at the end of the feeding-byre, and forms the north-east angle of the steading, while the dung-pit and liquid-manure tank are placed at the back.

In front of the byres and turnip-house are the calf-cribs and cattle-sheds, with court for young stock. These sheds, it will be noticed, face the south, an arrangement in all cases to be followed, as the animals will thereby enjoy a greater share of warmth during the winter; more especially, too, if a wall or other shelter pro-

DESIGN FOR A FARM-STEADING. No. 1.

fects the court from the east. A passage between the boiler- and turnip-houses is left in the byres, for the convenience of supplying food to the animals. From this passage also, there are openings in the wall by which the feeding-troughs for the cattle in the sheds can be replenished.

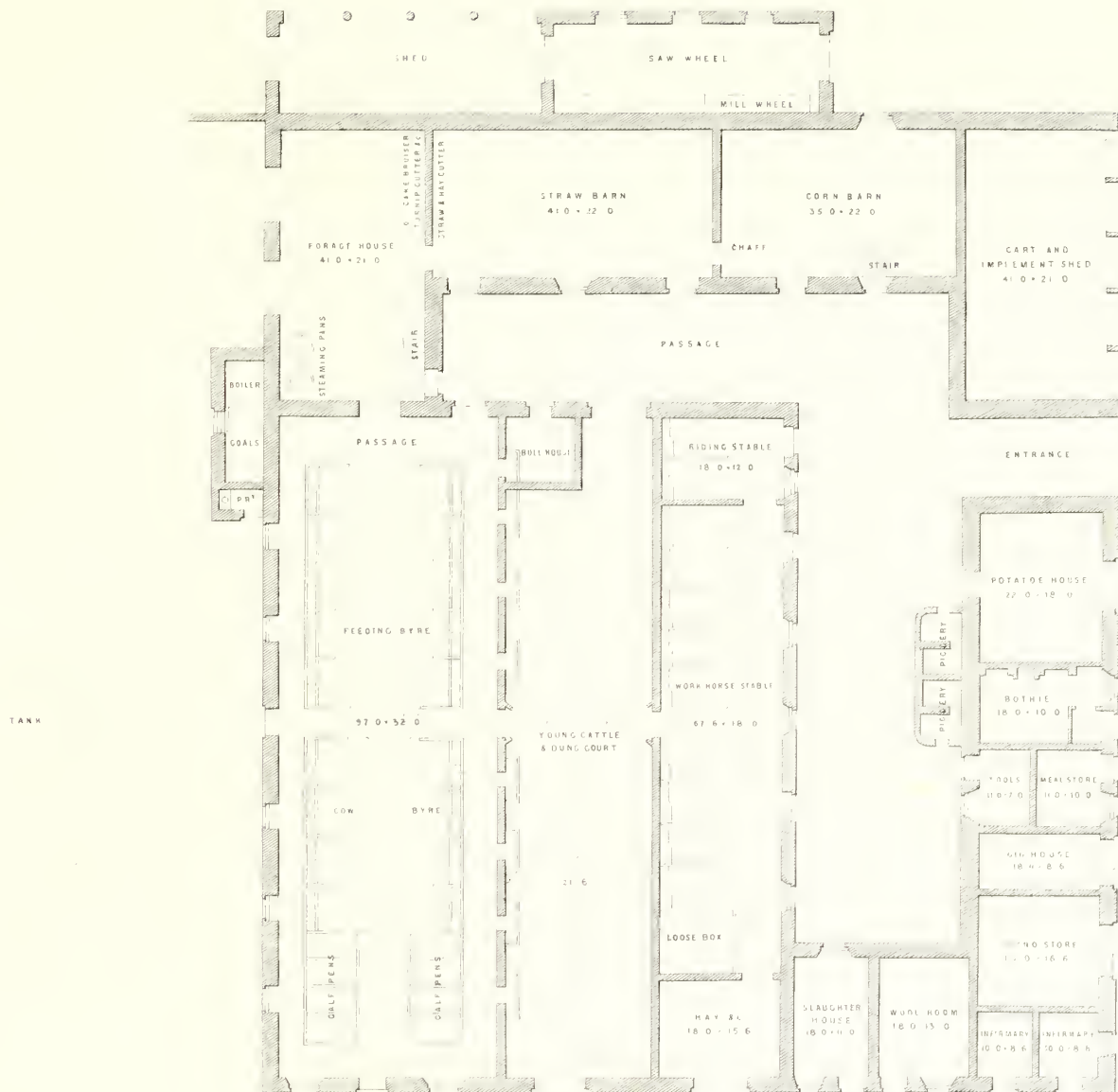
The piggery is situated in the north-west corner of the cattle-court.

The stable is disjoined from the main range of the steading; and, with the hay-house and bothy for the farm-servants, forms an independent building.

A passage for carts is left behind the western division of the steading, and gives access to the corn- and straw-barns, boiler-house, byres, calf-house, piggery, cattle-court, and stables. If desired, that portion of the passage opposite the calf-house might be covered, so as to enable the carts to unload the sheaves into the corn-barn, protected from the weather, in the event of rain occurring during the operation of carting in.

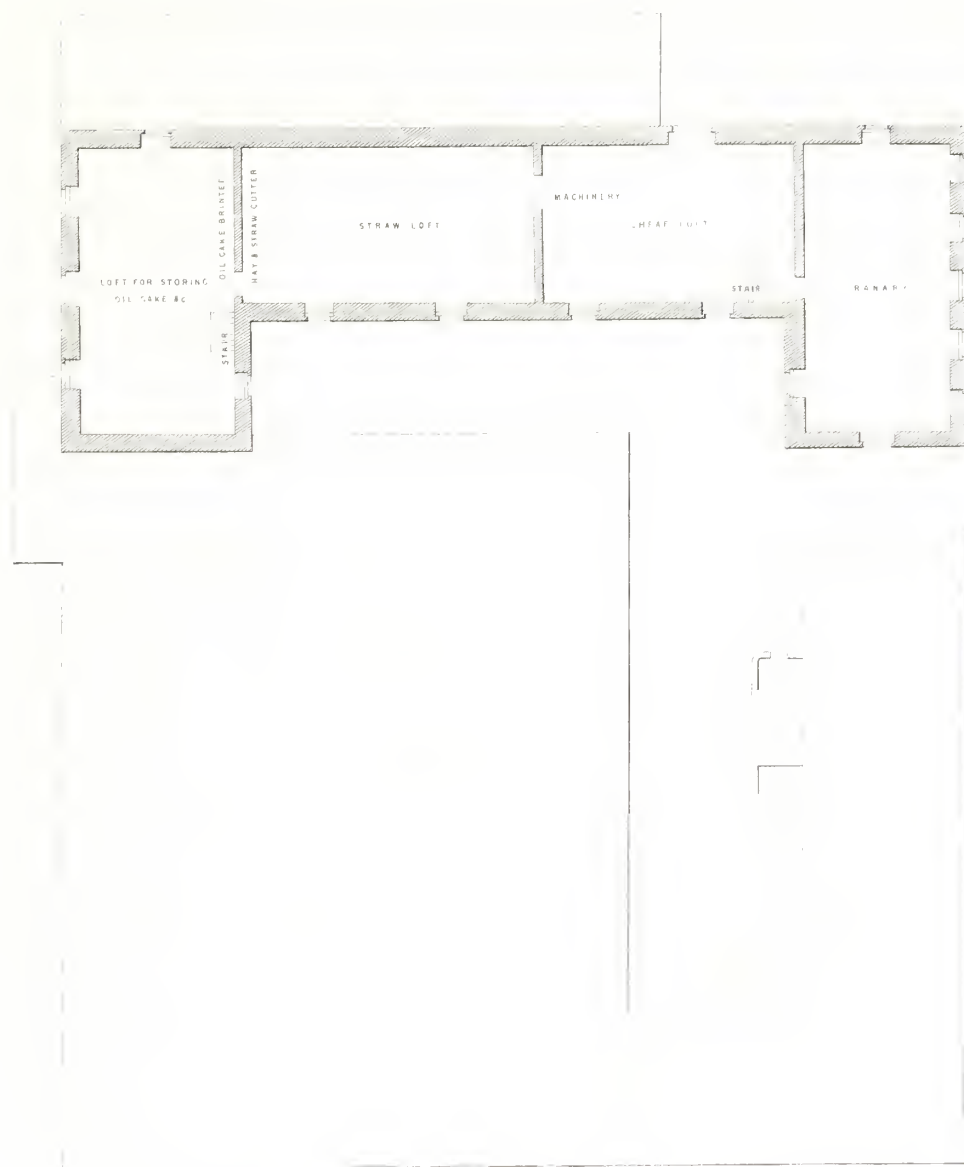
In Plate XLVII. an isometrical view of the buildings is given, by which it will be seen that there is a complete deficiency of architectural features. This characterises the whole of the designs in this Division of the work, the main object being to make the arrangement of the plans, and internal construction generally, as complete as possible, without incurring any expense that might be avoided; leaving it to the option of those who contemplate erections, to expend whatever sum they think fit on external embellishment.

The estimated cost of this steading, which is now in course of erection, is £300; the proprietor supplying home timber, and cutting it into the requisite scantlings, besides furnishing all carriages.



GROUND PLAN

10 5 0 10 20 30 40 50 60 70 80 90 100



PLAN SHEWING GRANARIES, AND OUTLINE OF LOW BUILDINGS



PLATES XLVIII. TO L.

DESIGN FOR A FARM-STEADING. No. 2.

THE present steading, which is adapted for a farm under the mixed system of husbandry, is designed for a locality having the advantage of water power.

The corn- and straw-barns, with lofts over, are here in the centre of the north side of the range, the driving-wheel for the thrashing and other machines being at the back. The forage-house, fitted with steaming apparatus, oil-cake bruiser, turnip-cutter, &c., is placed to the west of the straw-barn, with which it communicates. There is a loft above (see Plate XLIX.) for storing oil-cake, &c. The boiler- and coal-house are in a shed abutting on the main building.

The feeding- and cow-byres adjoin the forage-house, and form with it the western side of the steading, the calf-pens being placed at the south end.

In a direction parallel with the byres, and adjoining, is the court for young cattle and dung, which is roofed. At the north end is the bull-house.

The stable is placed next to the cattle-court, the hay-house being at one end and the riding-horse stable at the other. A passage communicates with the court for the convenience of wheeling away the dung.

A slaughter-house and wool-room connect the main building with the eastern

DESIGN FOR A FARM-STEADING. No. 2.

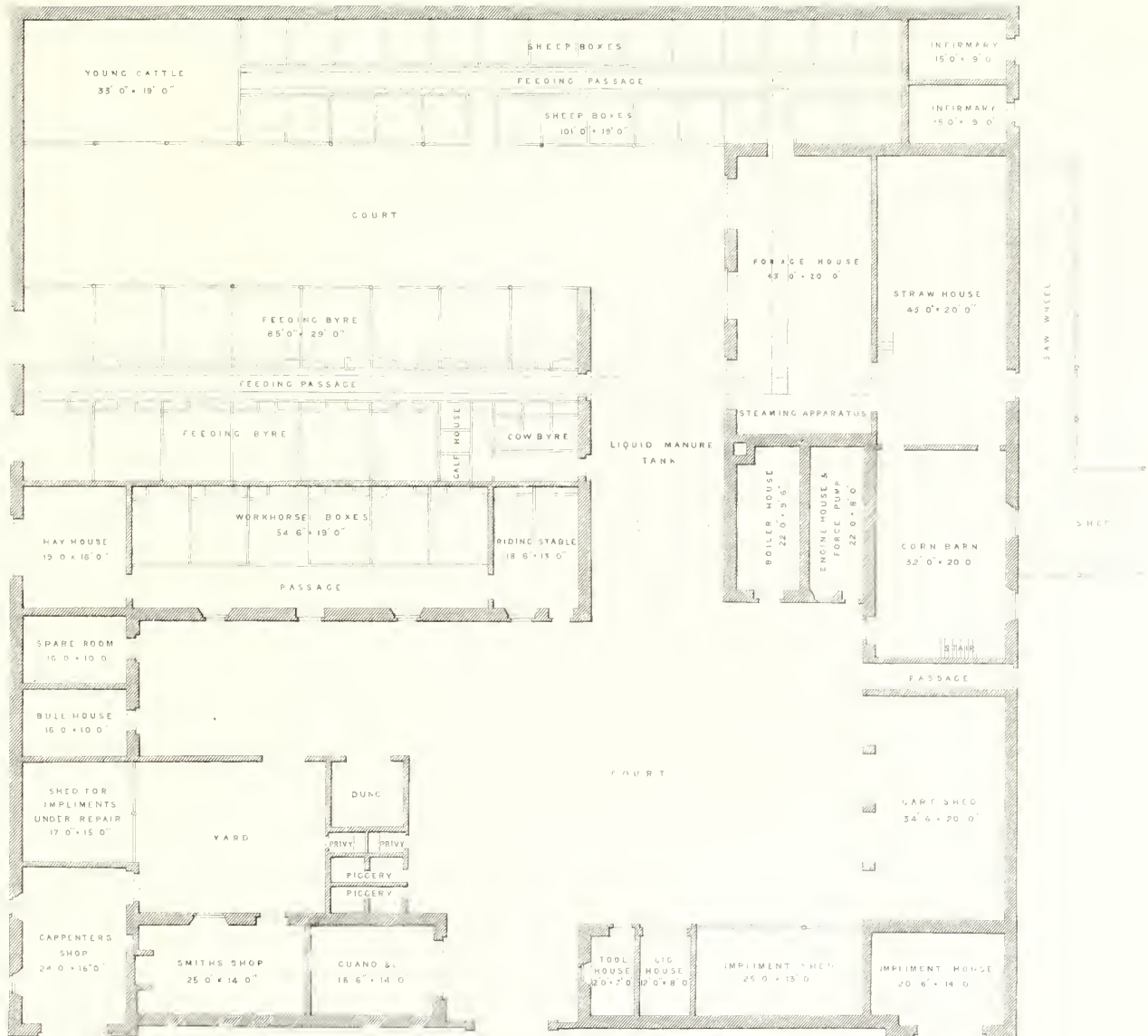
range, which contains, at the south-east corner, a cattle infirmary, and, proceeding northwards, a guano-store, gig-house, meal-store, tool-house, bothy for the farm-servants, and potato-house. The piggery is situated behind the latter.

The cart- and implement-shed abuts on the corn-barn, and forms the north-east corner of the steading. Over this shed is the granary, access to which is obtained by a stair from the corn-barn.

The dotted lines in the ground plan (Plate XLVIII.) shew the direction of the drains for the liquid-manure, terminating in the tank at the west side of the steading.

Plate L. gives the isometrical projection of the building.

The estimated cost is about £1900.



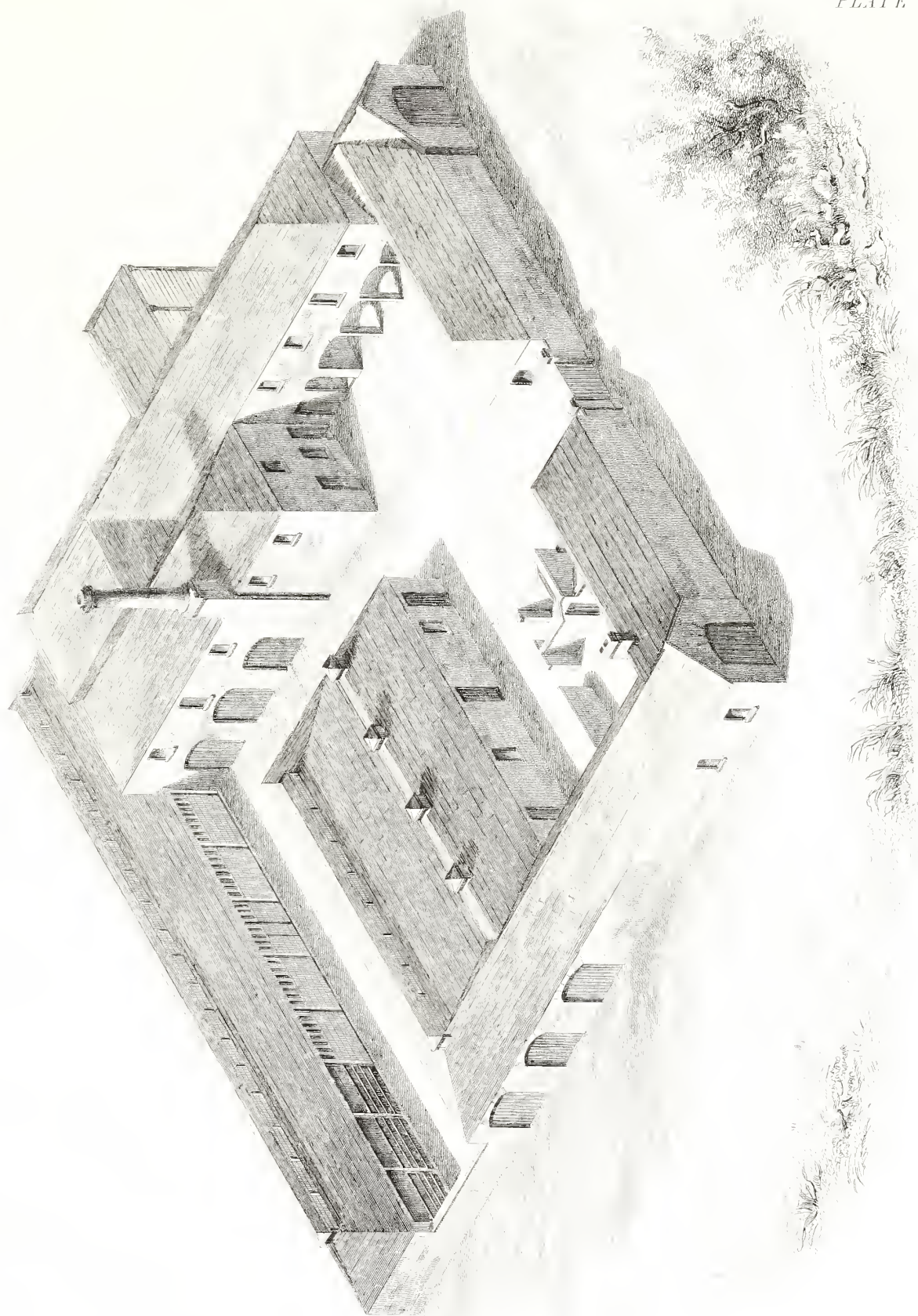
GROUND PLAN

10 5 0 10 20 30 40 50 60 70 80 90 100



PLAN OF THE UPPER FLOOR

10 5 0 10 20 30 40 50 FEET



ISOMETRICAL VIEW

PLATES LI. TO LIII.

DESIGN FOR A FARM-STEADING. No. 3.

THIS design is intended for a farm where the house feeding of cattle and sheep is carried on to some extent. The motive power for the machinery is steam.

The ground plan (Plate LI.) is a complete quadrangle with interior courts. The corn-barn is situated in the centre of the east division, with straw-house adjoining. The engine-house and boilers, with the forage-house, are arranged parallel with the corn- and straw-barns; and, together with the cart-shed, form the east side of the quadrangle. Over these departments (see Plate LII.) are placed the sheaf- and straw-lofts, the granary, store for oil-cake, &c., and drying-room, the latter being above the engine-room and boilers.

The north side of the quadrangle is occupied by the sheep-boxes, shed for young cattle, and infirmary. The two latter form respectively the west and east angles. The boxes and shed are protected at the back by a wall, the shed being open to the south, and the boxes closed by moveable frames; but, when the severity of the weather requires it, the shed may also be closed by a similar contrivance. (See Plate LIII.)

Separated by a court 22 feet wide, are situated the feeding-byres, fitted up for twenty-eight cattle, two being placed in each box. A stall for three cows, and three calf-cribs, are constructed at the south-east corner of the feeding-byre.

PLATES LI. TO LIII.—DESIGN FOR A FARM-STEADING. No. 3.

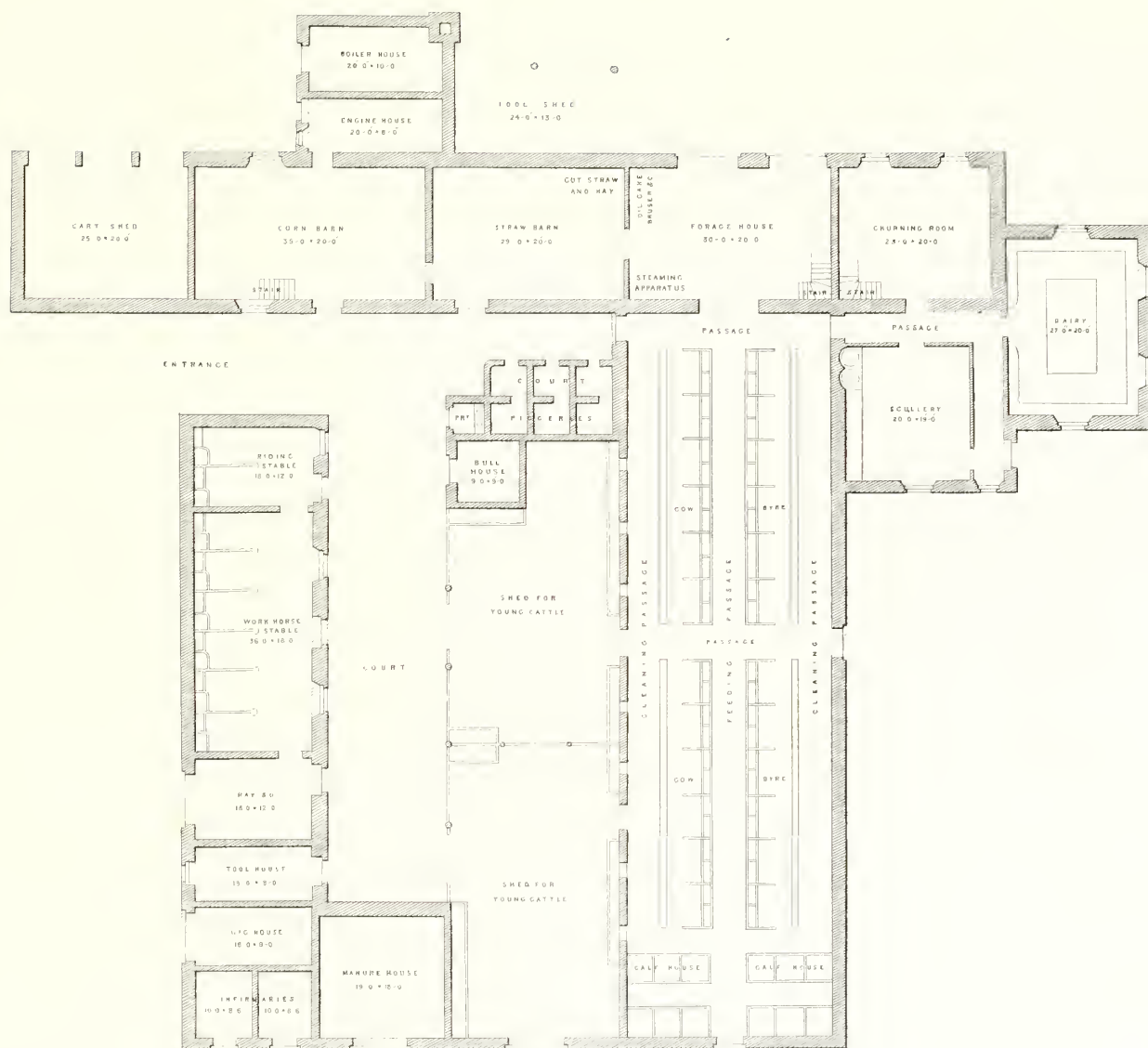
A tramway is laid down from the straw-house through the forage-house, and across the court to the feeding-byre, for the convenience of wheeling a truck for supplying the animals with food. A branch of this tramway is also laid along the forage-house into the feeding passage of the sheep-boxes for a similar purpose. Two small turning-tables are placed at each end of the branch to enable the food-truck to be shifted to the feeding-passages, which are at right angles with the branch line.

South of the feeding-byres are the hay-house, work-horse boxes, and riding-horse stable. Adjoining the hay-house is a spare room, and next to this the bull-house. The western side of the quadrangle is completed by a shed for implements under repair, and carpenter's shop, the latter forming the south-west corner.

A smith's shop, artificial-manure store, tool- and gig-house, implement-shed, and lockup-house for the smaller implements of the farm, form the south side of the steading. Between the artificial-manure store and tool-house is the cart entrance to the court, from which access is obtained to all the different parts of the steading.

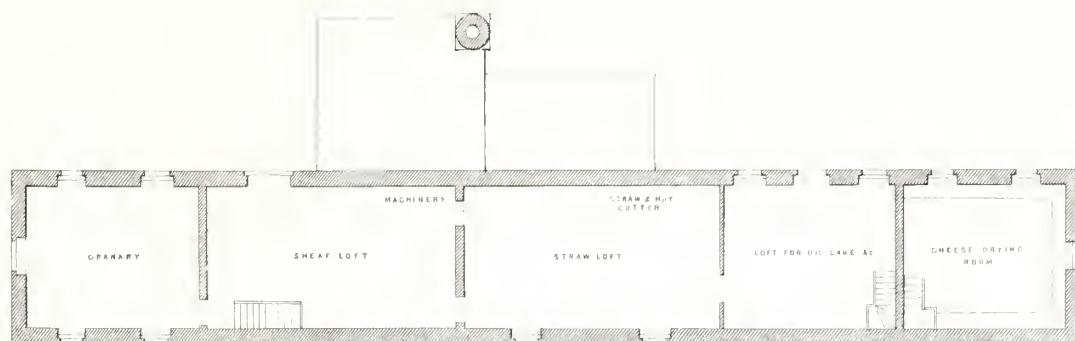
The liquid-manure tank is placed underneath the passage leading from the north to the south courts (see Plate LI.); and in the south-west corner of the latter is a yard inclosing the smith's and carpenter's shops, and the shed for implements under repair. Between this yard and the main court are a place for dung, privies, and piggery.

The estimated cost is about £2200, including carriages.



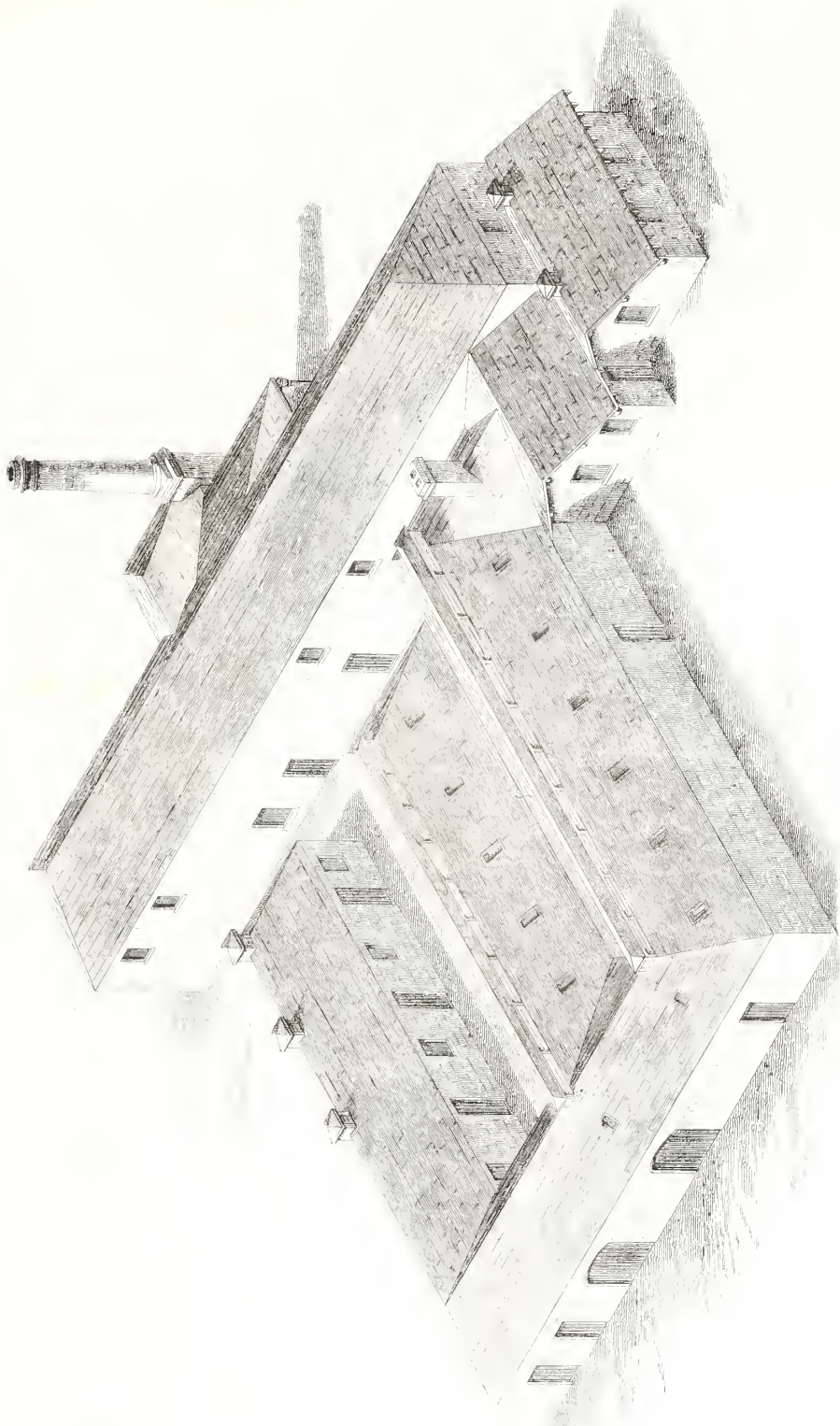
GROUND PLAN





PLAN SHEWING GRANARIES &c & OUTLINE OF LOW BUILDINGS





ISOMETRICAL VIEW

PLATES LIV. TO LVI.

DESIGN FOR A FARM-STEADING. No. 4.

THE present design is intended for a dairy-farm, the machinery of which is driven by steam.

The corn- and straw-barns are placed in the centre of the north range of the steading (see Plate LIV.), with engine- and boiler-houses contiguous thereto, the forage-house adjoining the straw-barn, and fitted with steaming apparatus, oil-cake bruiser, &c. Above these are placed the sheaf- and straw-lofts, store for oil-cake, &c. (see Plate LV). The granary forms the western termination of the upper floor.

The cow-byre is placed in a convenient position next to the forage-house, of which it, in fact, forms a continuation, the two occupying the whole range of the steading from north to south. At the south end of the byre are the calf-cribs. West of the byre, and parallel with it, are the sheds for young cattle, at the north end of which are the piggeries and bull-house.

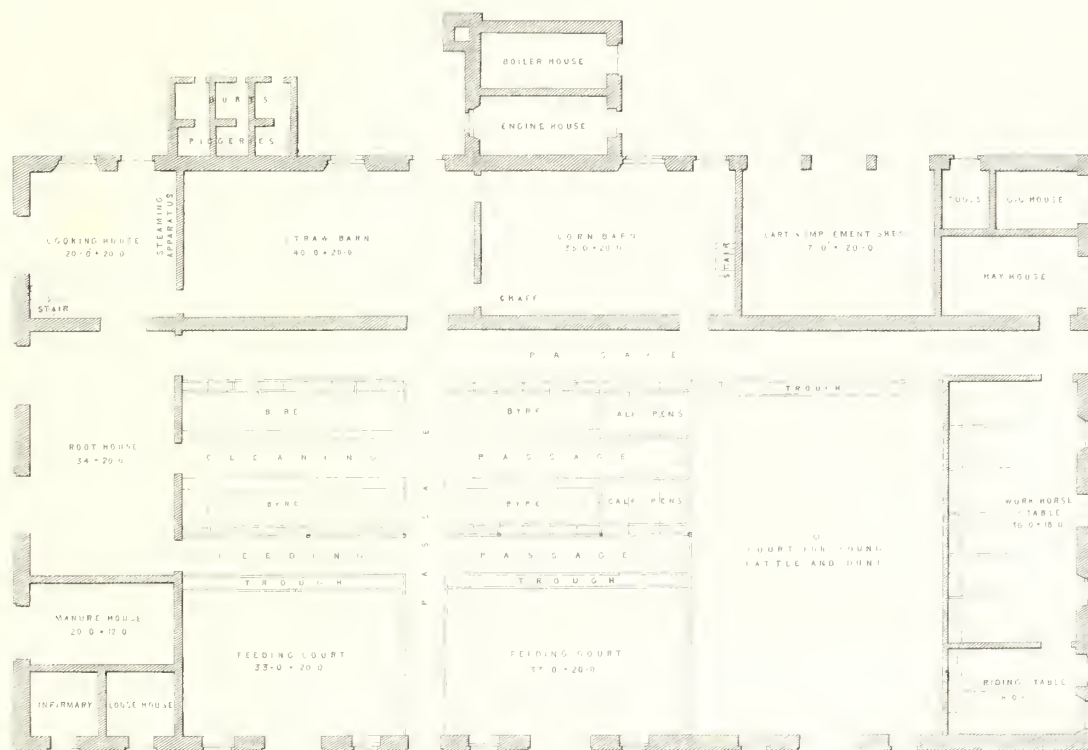
A court 18 feet wide separates the cattle-sheds from the stables. These are fitted up to accommodate three pairs of horses. A two-stall riding-stable is situated at the north, and the hay-house at the south end. Adjoining the hay-house are the tool- and gig-houses.

PLATES LIV. TO LVI.—DESIGN FOR A FARM-STEADING. No. 4.

The infirmary forms the south-west angle of the steading ; and between it and the cattle-sheds is placed the manure-house, protected from the weather. The cart-shed is next to the corn-barn, and forms the west angle of the north range.

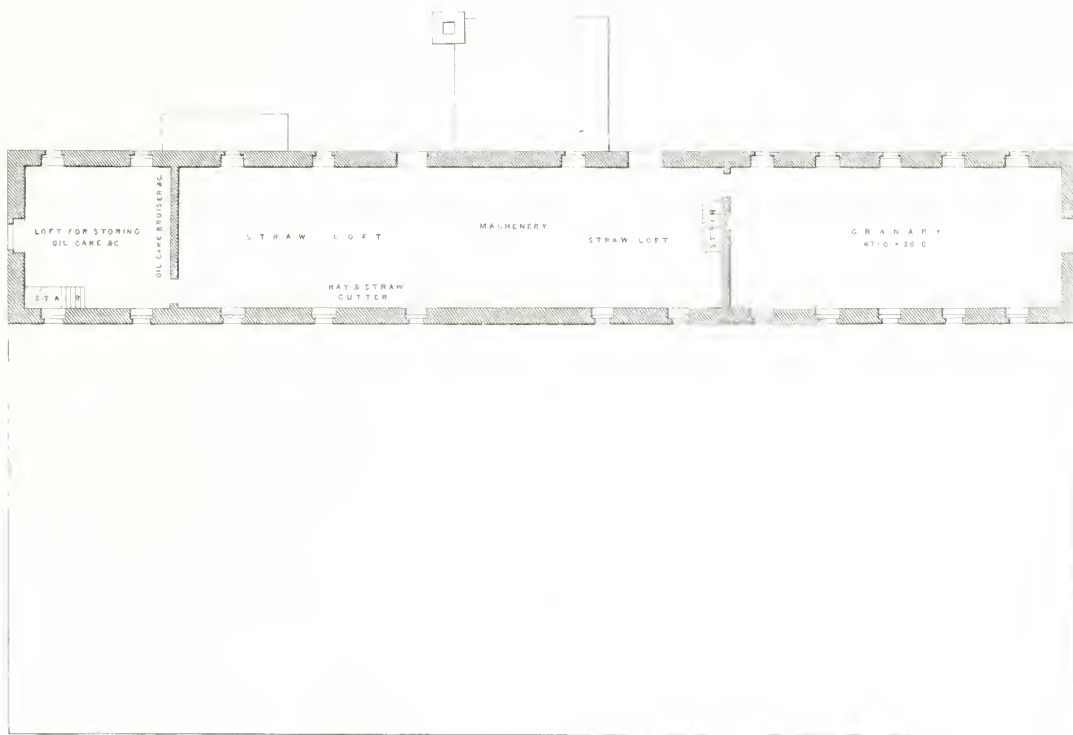
On the north-east side of the steading are situated the dairy, scullery, and churning-room, and over the latter the cheese-room. The dairy has the advantage of windows on the north, east, and south sides ; and, as the door is placed at the west side, it is capable of thorough ventilation, and of being kept cool at all seasons.

Ventilators are provided in the roofs of the stables and byre ; and the latter is lighted by rough plate-glass inserted at regular distances in the roof in place of the slates.



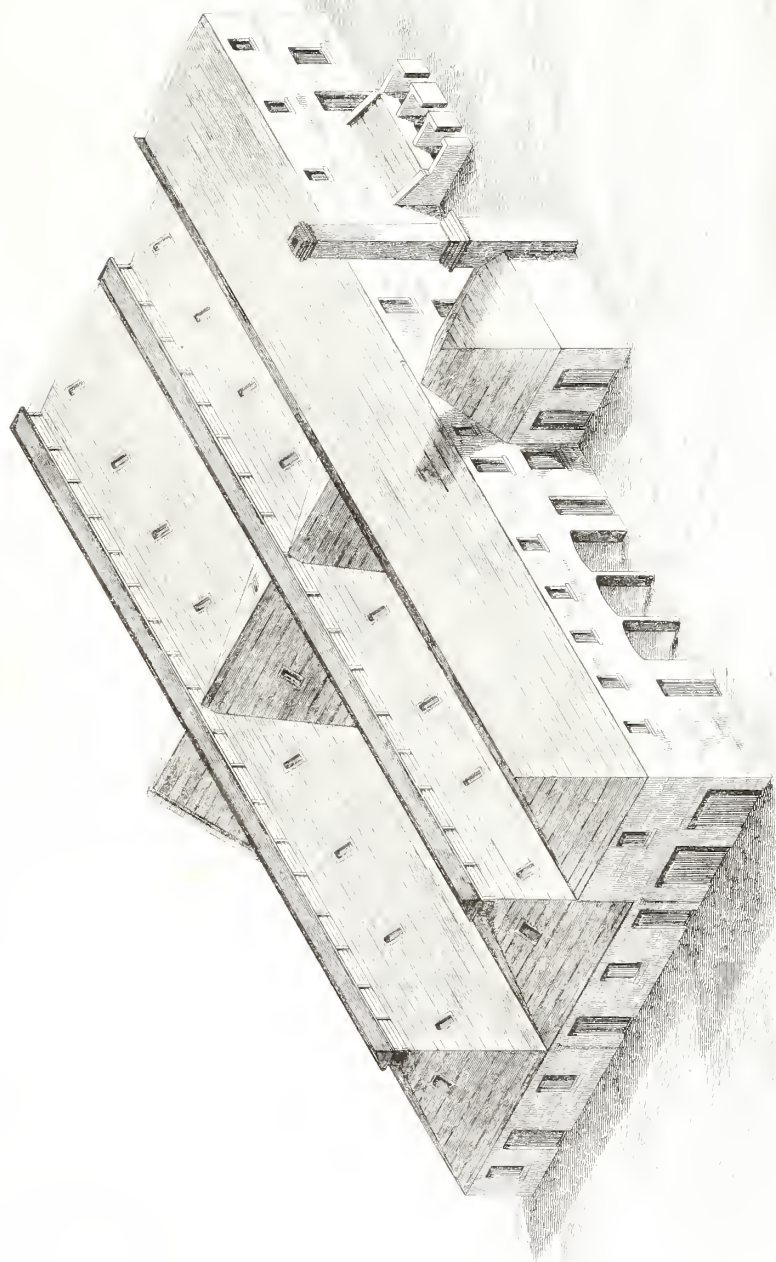
GROUND PLAN

10 5 0 10 20 30 40 50 60 70 80 90 100 FEET



PLAN SHEWING GRANARIES &c & OUTLINE OF LOW BUILDINGS





ISOMETRICAL VIEW

PLATES LVII. TO LIX.

DESIGN FOR A FARM-STEADING. No. 5.

THIS steading is intended for a pastoral farm in which the feeding of cattle forms the primary object. It consists of three parallel ranges of building 150 feet in length, from east to west.

In the centre of the north range is placed the corn-barn. The engine- and boiler-houses are in a separate building immediately adjoining. The straw-barn is to the west of the corn-barn, and next to it is the forage- or cooking-house, fitted with steaming-apparatus, &c. East of the corn-barn are the cart- and implement-shed, tool- and gig-houses, and place for hay. These are all comprised in the north range.

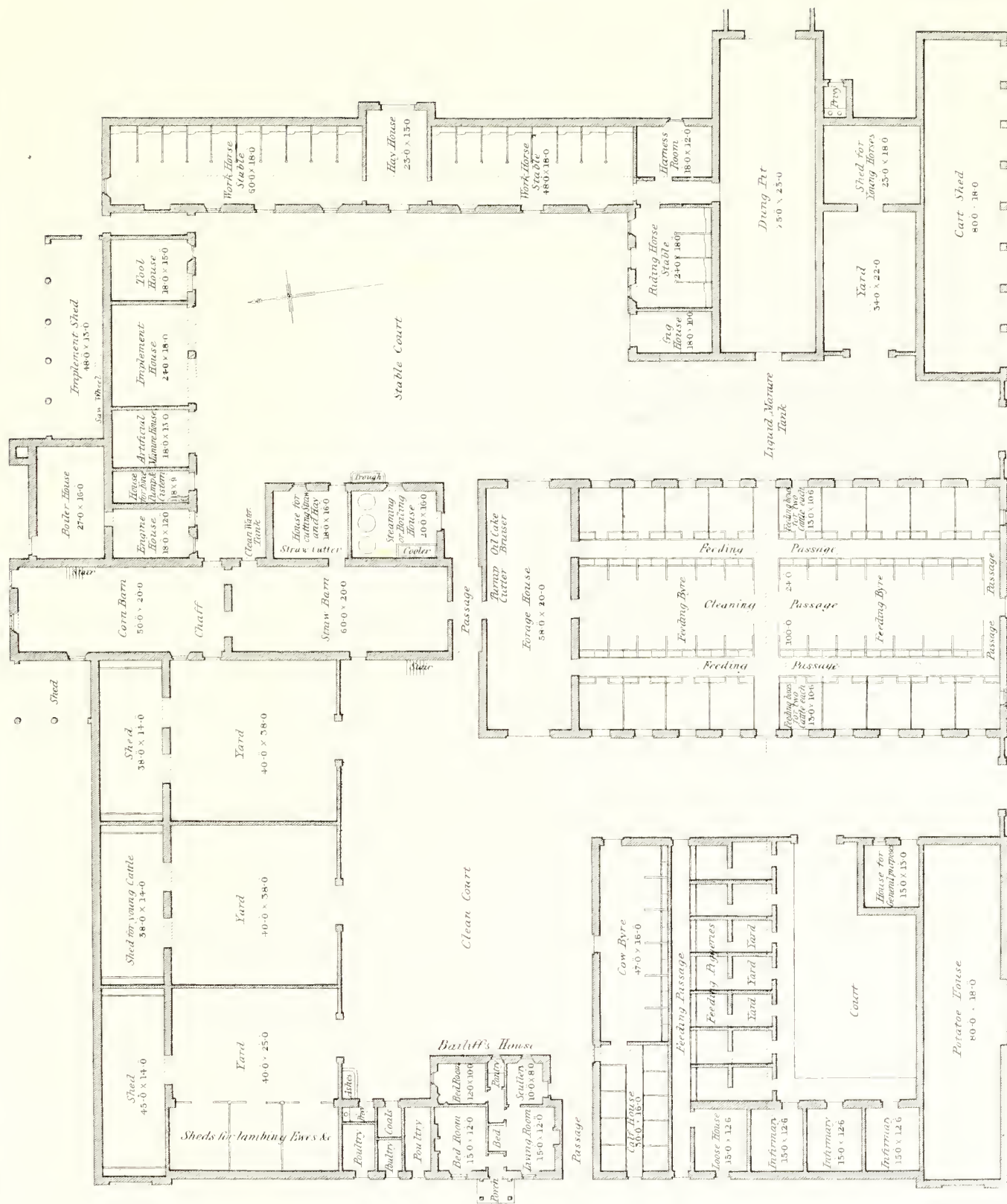
The straw- and sheaf-loft occupies the entire space over the corn- and straw-barns ; and in it is placed the hay- and straw-cutter. The granary extends over the cart-shed, gig-house, hay-house, and tool-shed. Over the cooking-house is a loft for storing oil-cake, &c., and in it the oil-cake bruiser is fitted up.

The stables are at the east side of the steading, separated from the hay-house by a passage 7 feet wide, the latter extending the whole length of the building, and affording means of access to the feeding-troughs of the stock. The stables have stalls for three pairs of horses ; and a separate division at the south end provides accommodation for two riding-horses.

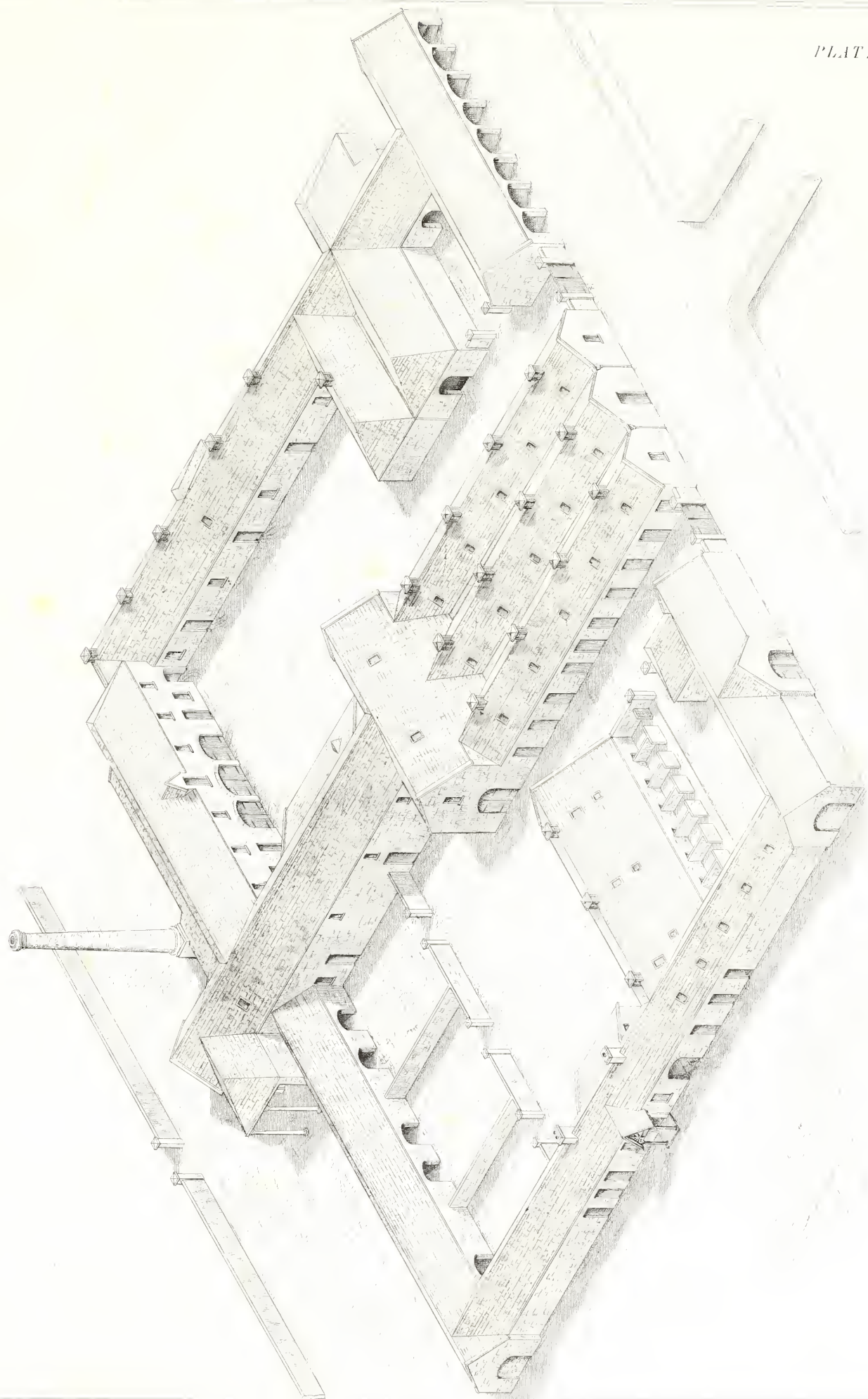
PLATES LVII. TO LIX.—DESIGN FOR A FARM-STEADING. No. 5.

The tool-house occupies the centre of the west side of the steading, adjoining the cooking- or forage-house, and the covered manure-house is placed next to it. The infirmary and loose-house adjoin, and form the south-west angle of the steading.

The byre, feeding-court, and court for young cattle (both of the latter being roofed), occupy the central part of the entire steading, as will be seen by inspecting Plate LVII. ; all the other offices forming, in fact, three sides of a quadrangle in which they are inclosed. The passages for feeding and cleaning are so arranged as to afford the greatest facility for accomplishing both objects with the least disturbance of the animals.



GROUND PLAN



ISOMETRICAL VIEW

PLATES LX. TO LXII.

DESIGN FOR A FARM-STEADING. No. 6.

THE present design was executed in competition for the Highland and Agricultural Society of Scotland's Gold Medal, and was fortunate enough to obtain it. In the description of it, therefore, we avail ourselves, to some extent, of the account published in the Society's Transactions for July 1852.

Upon inspecting the ground plan in Plate LX., it will be seen that the corn-barn, with the sheaf-loft and machinery above, occupies a central position in the north range, where it is contiguous to the stack-yard, having a covered shed attached for putting carts into when unloading the sheaves for the barn; which shed will, it is presumed, prove useful when a heavy rain may happen to fall during the operation of carting in the corn; for the loaded cart being under the shed, the stack may be covered by a tarpaulin, and the whole thus protected from the weather.

The chaff is taken from the chaff-house (which is boxed off the corn-barn) into the courts for young cattle, where it is used for litter. The corn-barn should be floored with timber, and properly protected from damp and the inroad of vermin.

The straw-barn extends towards the centre of the buildings, and is conveniently situated for distributing the straw to any place where it may be required,

PLATES LX. TO LXII.

and nearest to those places where the greatest amount of it will be consumed. Adjoining the straw-barn is the house for cutting hay and straw.

The engine- and boiler-houses are situated to the east of the corn-barn, with a room fitted up above the former for drying. These, together with the artificial-manure house, implement-house, and tool-house, occupy the range on the north of the stable-court, having a granary above the latter places.

The work-horse and riding-horse stables, with the hay-house and harness-room, and shed for young horses, are situated in the east range, where there is ready access from the straw-barn and steaming-house, and also for depositing the dung in the manure-pit, which is situated between the riding-horse stable and shed.

The stables are shewn as being lighted by windows in the walls, having fixed sashes. Roof-lights may, if desired, be adopted by using unfinished plate-glass, the same as proposed for the byres, &c.

In the centre of the buildings, and separated from the straw-barn by a passage of communication, is the forage-house, or kitchen of the steading, where the food is prepared, and distributed along the passages of the feeding-byre, which will be seen to contain, in the centre division, stalls for feeding fifty-two cattle; and on each side nine boxes, for feeding two cattle in each. The manure from the central feeding-byre is readily conveyed to the dung-pit through the centre passage, and the manure channel flushed with water to the liquid-manure tank, so that the whole may be cleansed with economy and expedition. The divisions in the feeding-byre may be fitted up, varying a little in size, so as to accommodate greater or lesser animals. Below each feeding-passage is carried a cold-air trunk, for admitting fresh air, having openings in the passage, covered by cast-iron gratings, as shewn by the dotted lines in Plate LX.; and the whole is rendered healthy by ventilators on the roof, as seen in the isometrical view, Plate LXII. The building is lighted by windows in the roof.

DESIGN FOR A FARM-STEADING. No. 6.

Above the forage-house is a granary, or store for oil- and rape-cake, where it can readily be put down to the cake-bruise in the forage-house below ; or, if preferred, the bruise can be placed in the granary, and this—with the turnip-cutter, straw-cutter, and corn-bruise—can be driven by a connection from the engine.

To the west of the feeding-byre are the cow-byre, calf-house, and piggeries, which, with the infirmary, loose-house and potato-house, form the south-west division of the steading ; the cow-byre and piggeries being conveniently situated for the forage-house and steaming-house. The piggeries are supplied with food from a feeding-passage, having swing-doors above the troughs.

Should more accommodation be required for servants' cows, it is proposed they should stand in the feeding-byre.

The range to the west of the corn-barn is occupied by sheds and courts for young stock, with a shed for lambing ewes or other purposes, the divisions being moveable. Adjoining are the poultry-houses and the bailiff's house, the latter being placed in the west range, as the most healthy position for a family. The poultry have ready and free access to the stackyard, without coming in contact with the cattle. If larger poultry-houses are desired, they can easily be extended into the adjoining shed.

The steaming apparatus is supplied with the waste steam from the engine-boiler ; but when the engine is not in use, a smaller boiler can be used for the purpose, placed beside the larger one. The steaming-pans should be made to revolve, and at once empty themselves into the barrows, by which the food is conveyed through the various passages. If the system of boiling the food is preferred, the necessary boilers can easily be substituted for the steaming apparatus, by placing the flue in the east wall. Steam pipes may also be conveyed underneath the floor of the feeding-byre, below the animals, for the purpose of raising the temperature during winter.

PLATES LX. TO LXII.

In the implement-shed, next the boiler-house, is a saw-wheel driven by the engine, for the purpose of cutting any timber that may be required on the farm. Adjoining the engine-house a double-action force-pump is fixed, to be used for pumping the liquid-manure over the dung, or forcing it from the steading for the purpose of irrigation ; and also for filling a large cistern with water, which is placed beside it, for supplying the various parts of the steading, where it cannot be accomplished by gravitation from an existing spring. Mill-stones for grinding grain may also be erected in connection with the shaft of the engine, which passes from the fly-wheel immediately below the floor of the sheaf-loft, where it does not interfere with any communication.

The height of all the two-story buildings is 16 feet to the top of the walls ; and all the other buildings are of sufficient height to afford health and comfort to the animals.

Upon examining the isometrical view, Plate LXII., the general appearance of the buildings will be more distinctly seen.

Various modifications may be made in the plan, without affecting its general usefulness : the carts, for instance, may be placed under the granary, on the north side of the stable-court, where they would be inclosed within the gates. A smith's and carpenter's shop, and a weighing-machine, may also find a place in any convenient part of the steading. A feeding-house for sheep could likewise be constructed ; and, if desired, a place for servants to sleep in above the hay-house or stable, in order to be near the horses during the night.

The estimated expense of this steading is £2800, exclusive of carriages, and on the supposition that stone can be procured from a quarry on the estate.

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